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THE JUNIOR HIGH SCHOOL



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THE JUNIOR HIGH SCHOOL

BY

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UNIVERSITY OF CALIFORNIA

SOUTHERN BRANCH

AUTHOR OF "THE READING PROCESS"

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PREFACE

IN planning this book, the author proceeded upon the assumption that the junior high school movement is not an isolated phenomenon but an integral part of a much larger movement — the movement which has as its aim the re-making of the American public-school system in terms of true function. This accounts for the fact that the discussion, although focused upon the new institution, proceeds, nevertheless, constantly in terms of the larger whole.

The author has assumed, further, that an adequate understanding of the junior high school movement is in a large measure conditioned by a fairly definite historical and comparative orientation. Accordingly, the historical and comparative background of the new institution has been canvassed with more than usual care. The canvass is, however, decidedly selective, only the more pertinent aspects having been selected for emphasis.

In organizing the materials it seemed best, from the standpoint of the needs and interests of the student, to center the discussion about certain major aspects of the situation — the historical and comparative background, the pupils, the major purposes, the program of studies, extra-curricular activities, and problems in organization and administration — instead of treating many topics in relative

isolation. Some aspects, however, — notably the pupils, the program of studies, and problems in organization and administration, — are so vast that each merits a book by itself. In such cases the author has confined himself, as far as possible, to fundamental considerations.

Beyond this, the author has endeavored to make his account of the new institution representative of the best thought and practice throughout the country. The junior high school has been, and still is, a great coöperative enterprise. It is the product of no one man and of no one section of the country. It is, moreover, although quite beyond the pale of question, still in the making. There is, therefore, urgent need of continued and ever growing coöperation on the part of all concerned. Only thus can the issue be brought to successful conclusion.

Finally, it may not be amiss to state that the book as such has grown up largely in the classroom. The content and the organization are for the most part those of a course on The Junior High School. All the chapters have been used in manuscript form, and the author is in no small degree indebted to the reactions of his students.

Special acknowledgments are due to Sir John Adams, of the University of London, for valuable suggestions in connection with the chapter on The Organization of School Systems in European Countries, and to Dean Marvin L. Darsie, of the University of California, for helpful criticism in connection with the chapter on Junior High School Pupils.

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The author is greatly indebted also to Charles H. Judd, Thomas H. Briggs, E. K. Fretwell, R. L. Lyman, B. T. Baldwin, Franklin Bobbitt, and many others for valuable materials quoted from journals and monographs.

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THE JUNIOR HIGH SCHOOL

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CHAPTER I

THE EVOLUTION OF THE AMERICAN SCHOOL SYSTEM

The American school system, after centuries of evolution, emerged finally in the form of a graded ladder scheme. Not only is each of the main divisions — the elementary, the secondary, and the higher — organized in the form of consecutive units or grades, but the main divisions themselves are arranged in sequential order. In consequence, an American child may enter the elementary division, progress regularly through this and the succeeding divisions, and leave in the end thoroughly equipped for one of the learned professions. Such a school system is democratic in theory at least, and the American people believe that it can be made so in practice. It stands in marked contrast to the leading European systems, which consist of two rather separate and distinct branches — one for the upper classes, embracing elementary, secondary, and higher education, and the other for the masses, embracing elementary and vocational education.

The democratic American educational ladder scheme was evolved gradually in the course of several centuries. In tracing its evolution we shall center our discussion about three rather distinct historical periods — the Colonial,

extending from the time of the first settlements to the Revolution; the Early National, extending roughly from the Revolution to the Civil War; and the Modern, extending from the Civil War to the close of the first decade of the twentieth century. Each of these periods had its distinct economic, social, and political characteristics, and the school was strongly influenced by these. But there was something even more formidable, though less tangible — namely, the temper, the traditions, and the ideals of the dominant element of our population. A people with a different temper, with different traditions, and with different ideals would have wrought out a very different system of education.

THE COLONIAL PERIOD

Characteristics of the colonial period. The colonial period was dominantly a period of transplantation. To a marked extent the colonists reproduced on the new soil the institutions and the practices to which they had become accustomed in the mother country. As time went on, and in many instances from the very outset, there was of course marked adaptation to new conditions. Frequently, too, the colonists departed from established institutional practices because they cherished ideals which differed from those of the mother country. In the main, however, the character of colonial institutions, educational and otherwise, was determined by European antecedents.

Colonial attitudes toward education. There were in evidence among the colonies three rather distinct attitudes toward education. The settlers of Virginia and the southern colonies generally, for the most part adherents of the Church of England, assumed the prevailing English atti-

tude, which meant, aside from provision for trade-apprenticeship for orphan and pauper children, no state action in behalf of education, its encouragement being left to private agencies, including the church. The settlers of Pennsylvania and most of the other middle colonies, for the most part Calvinists and Lutherans, adhered to the prevailing continental protestant ideal of universal elementary education for religious ends and under church control, and so reproduced in their midst as far as possible the parochial elementary school which had long since taken firm root in the protestant countries of continental Europe. The settlers of Massachusetts and other New England colonies (with the exception of Rhode Island) — for the most part dissenters from the Church of England — believed, in common with other Calvinists, in universal elementary education for religious ends and in such secondary and higher education as would insure intelligent leadership for church and state. In contrast with orthodox England, they regarded the church and the state as essentially one, their ideal being the religious state. Hence at a very early date they made departures from established English educational practices — departures the significance of which it is difficult to appreciate fully. They called upon the state to enforce elementary and secondary education, and they adopted the principle that public money raised by general taxation may be used for the support of such education.

These three attitudes existed side by side, in their respective territories, throughout most of the colonial period. They were in a sense competitive attitudes, any one of which might in the end win out and determine the educational point of view of the country at large. As the settlements spread westward these different attitudes came into

more intimate contact, since the settlers from the various colonies often met in the new communities. This led to a long-protracted struggle for supremacy, with many a bitter conflict. Gradually, in the course of the early national period, the New England attitude won out and became the educational attitude of the whole nation, in the sense that the whole nation came to believe in a school system controlled by representatives of the people and supported by public funds, the religious motive giving way to the civic.

Colonial schools. At the time that America was being settled, the parochial elementary school was rather firmly established in the protestant countries of continental Europe. In England elementary education was given largely in the home and in private dame schools, and to a limited extent in charity or pauper schools. There were also in most European countries private writing and reckoning schools. Beyond this, there was rather general provision, especially in England, for apprenticeship training for orphan and indigent children. Secondary education was carried on most commonly in Latin schools of one kind or another. In England these were known as grammar schools. Higher education was furnished by the universities with their varied colleges. As indicated earlier, the colonists transplanted these institutions in a large measure to the new soil, making such adaptations as were demanded by new conditions and varying ideals.

In Virginia and the southern colonies generally, elementary education was supplied largely by tutors and by private schools and to some extent by charity and pauper schools. It was for the most part a private and voluntary affair, neither the state nor the church concerning itself

seriously about it. In Pennsylvania and other middle colonies, it was supplied largely by parochial schools and was compulsory only in so far as the several sects enforced it among their constituents. In Massachusetts and other New England colonies, elementary education was at first furnished by the home, by private dame schools, and by elementary schools maintained by the towns. There was at the outset no enforcement agency except the church, which held that it was the duty of the parents to see that their children were instructed in reading and in the principles of religion. Soon, however, the church called the state to her assistance, and compulsory laws were passed. At first these laws merely required the town authorities to see that parents and guardians complied with their educational duties; later on they compelled the towns, under penalty of fine, to maintain schools wholly or partly at public expense.

The dame school. Although the children of colonial New England were sometimes taught to read in the home, they were more often sent either to dame schools or to town elementary schools for this purpose. The dame schools were at first purely private schools conducted by women, usually in their homes. They received children, both boys and girls, between the ages of four and seven and taught them the elements of reading and sometimes, in the case of the girls, also a little handwork. Toward the close of the seventeenth century, with the increasing dispersion of the population, the dame school often came to assume a semipublic character, the dames being not infrequently designated and in part paid by the town authorities. Later on, with the rise of the moving and the divided schools and the coming of the district system, the dame school was,

in the case of the smaller communities and the outskirts of the towns, often transformed into the school of the three R's. As such it became the public elementary school of the community. In the larger and more densely populated communities, the dame school often became the primary department of the elementary school, the town elementary school becoming the grammar department.

The town elementary school. A number of New England towns voluntarily established elementary schools at an early date. These schools were supported in various ways — by endowments, tuition fees, voluntary contributions, and general taxes. In time, town elementary schools became more or less compulsory. Thus the Massachusetts law of 1647 provided that "every township after the Lord has increased them to the number of fifty householders shall then forthwith appoint one within their town to teach all such children as shall report to him to write and read." Similar provisions were made in several other New England colonies. Although the term "children" is commonly used in legal documents, the schools as such appear to have been limited to boys, at least until well toward the close of the colonial period. The formal education of the average girl was essentially complete once she had mastered the elements of reading and sewing, and instruction toward these ends was supplied chiefly by the home and the dame school. In some of the larger communities there were of course private schools where the exceptional girl was able to continue her education. In time, too, some communities began to provide separate elementary instruction for girls, either during the summer or at special hours. The school of the three R's, which came into prominence in the smaller communities during the latter part of the period,

also tended by force of necessity to supply the rudiments of an elementary education rather indiscriminately to both sexes. All told, however, as Small concludes after examining the records of some two hundred towns, "it required nearly two hundred years from the founding of the first school to place girls on an equal footing with boys."¹

In general it was the policy of the masters and the town authorities to admit boys to these schools at the age of about seven, after they had learned to read the primer at home or in the dame school. The chief purpose of these elementary schools was to continue instruction in reading and to teach writing and, to some extent, arithmetic. In actual practice, however, the masters were evidently quite commonly compelled to devote much of their time to teaching beginning reading. These schools were indefinite in length and ungraded. Sometimes there were two schools — a reading school and a writing and reckoning school. In such cases the boys divided their time between the two. Toward the close of the colonial period the elementary school began to emerge quite definitely as the grammar department in the new scheme of elementary education in the larger communities, the primary department being supplied by the dame school on either a public or a private basis.

The moving school. With the coming of the eighteenth century the New England town began to lose much of its compactness. Slowly but surely the settlers were drifting away from the centers. In consequence, the town school became inaccessible to an increasing proportion of the inhabitants. Since all were taxed more or less for the support of schools and all were in need of school facilities of

¹ *Early New England Schools*, p. 289.

one kind or another, there was naturally much dissatisfaction with this state of affairs. It became increasingly necessary, therefore, in all but the larger centers, to supplant the fixed central school with a school which moved at stated intervals from one part of the town to another. Most frequently the moving school was an elementary school, but at times even the Latin grammar school was compelled to move from place to place. In time the sections of the town where the school was temporarily in session became more and more fixed until they finally emerged as independent districts, most commonly after the Revolution.

The Latin grammar school. As indicated earlier, the Latin school was the common medium of secondary education throughout Europe at the time of the settlement of America. Not only had this institution taken firm root in the leading European countries, but its character had been rather well defined, so that there was little variation in its essential features. The colonists, recognizing the need of trained leadership, early began to transplant this institution to the new soil, the first Latin school being established in Boston in 1635. All but one of the thirteen original colonies established such schools in the course of their existence. In the southern and middle colonies the establishment of Latin schools was left largely to private endeavor. Their number was, therefore, at all times relatively small. In New England the towns voluntarily began to establish such schools at an early date, Massachusetts alone having provided seven before 1647. At this point the state was called upon to make their establishment compulsory. Thus the Massachusetts law of 1647, after requiring towns of fifty families to designate someone to

teach reading and writing, adds: "and it is further ordered that where any town shall increase to the number of 100 families or householders, they shall set up a grammar school, the master thereof being able to instruct youth so far as they may be fitted for the university." Towns which failed to live up to this requirement were to pay a fine of £5. Later the amount of the fine was increased — to £10 in 1671 and to £20 in 1683. At the latter date it was also ordered that towns of five hundred families should maintain two grammar schools. In time most other New England colonies made similar provisions. Small estimates that there were from twenty-seven to thirty-four Latin grammar schools in the New England colonies by 1700.¹

During the eighteenth century the path of the Latin grammar school was beset by many difficulties. The "intellectual fiber of the English college-bred fathers had largely disappeared"; the religious unity and the social solidarity so characteristic of the early New England town were slowly but surely giving way to disintegrating forces; and as the dangers from Indian attacks decreased, the settlers ventured farther and farther from the town centers, so that the town school became increasingly inaccessible to many of the inhabitants. These influences, coupled with the fact that the Latin grammar school made at best a very limited contact with the needs of the people, rendered it increasingly difficult to maintain these institutions. There was a growing disposition on the part of many towns to evade the laws which required the establishment and maintenance of such schools. Not infrequently, in order to secure general support by way of taxation, it became necessary to allow these schools to move from one section

¹ *Early New England Schools*, p. 30.

of the town to another, as in the case of the elementary schools, and in time it became necessary to lower the legal requirements. In spite of this, however, the Latin grammar school continued to maintain its place as the leading type of secondary school, not only in New England but throughout colonial America, up to the time of the Revolution. Meanwhile another institution — the academy — was in the making, but this did not come into prominence until after the close of the colonial period.

During the major portion of its existence — at least until well into the eighteenth century — the Latin grammar school received boys at the ages of seven or eight, after they had presumably learned to read at home or in the dame school. Its entrance requirements were, therefore, essentially the same as those of the town elementary school. Not infrequently, however, because of abnormal conditions, the masters appear to have found it necessary to teach beginning reading as well as Latin. Toward the close of the eighteenth century the entrance requirements had risen somewhat. Thus, the program of the Boston Latin school, adopted in 1789, states that "all candidates for admission into this school shall be at least ten years of age, having previously been well instructed in English Grammar."¹ During the nineteenth century the age of admission to the Boston Latin school was raised to twelve years.

During most of the colonial period the boy completed the work of the Latin grammar school at the age of about fourteen or fifteen, whereupon he entered college if he continued his education. The curriculum of the Latin grammar school consisted mainly of Latin and beginning Greek. In some communities a limited amount of mathematics,

¹Inglis, A., *Principles of Secondary Education*, p. 164.

mainly for purposes of navigation and surveying, was added. Even as late as 1789 the program of the Boston Latin school called for Latin and Greek only. The all-important purpose of these schools was to prepare boys for college, and the entrance requirements of the colonial college did not go beyond the classics, those for Harvard being stated as follows:

Whoever shall be able to read Tully or any other such like classical author at sight, and correctly and without assistance to speak and write Latin both in prose and verse, and to inflect exactly the paradigms of Greek nouns and verbs, has a right to expect to be admitted to the college, and no one may claim admission without these qualifications.¹

Aside from preparing boys for college, the Latin grammar school made but little contact with the growing needs of the colonists. That there was need of other contacts is brought out very forcibly by the fact that many of those who attended Latin grammar schools never reached college. Even during the seventeenth century, as Small points out, whole towns credited with maintaining Latin grammar schools do not appear to have sent a single student to college; and during the eighteenth century the breach grew even more pronounced. It is little wonder, therefore, that the Latin grammar school was never popular in colonial America, and that another and more suitable institution was evolved in due time.

Higher education. The college was the only agency of higher education during the colonial period. As such, it was a direct importation from England. The Renaissance university, it should be borne in mind, consisted of four

¹Martin, G. H., *Evolution of the Massachusetts Public School System*, pp. 59-60.

departments — the arts course and the professional schools of law, medicine, and theology. The arts course was intended to supply liberal training and to prepare for the professional schools. It was this arts course, as embodied in the English college, that was transplanted to America. Since it was the chief purpose of the earlier colonial colleges to prepare men for the Christian ministry, and since there were no distinct professional schools, the colonial college curriculum inevitably took on a strong theological bias.

Harvard, founded in 1636, offered at first a three-year course. In 1642 the course was lengthened to four years, the requirements for graduation being as follows, according to the laws of President Dunster:

Every scholar that on proof is found able to translate the original of the Old and New Testament into the Latin tongue, and to resolve them logically, and shall be embued with the beginnings of natural and moral philosophy, withal being of honest life and conversation, and at any public act hath the approbation of the Overseers and Masters of the college, may be invested with his first degree; but no one will expect this degree unless he shall have passed four years in college and has maintained a blameless life and has sedulously observed all public exercises.¹

William and Mary, Yale, and Princeton—founded in 1693, 1701, and 1746 respectively—followed the Harvard curriculum very closely. Columbia University and the University of Pennsylvania, founded near the middle of the eighteenth century, were the first to stress distinctly secular aims. In the case of the former it was stated that students “are to be taught not only goodness but such useful knowledge as may render them creditable to their families and friends, ornaments to their country, and useful to the public

¹ Foster, W. T., *The College Curriculum in the United States*, p. 10.

weal in their generation," and that "there is no intention to impose on the scholars the peculiar tenets of any particular sect."¹ Aside from these two instances, there was no change in the aims and the curriculum of the college until after the Revolution.

The colonial college, although not supported by public taxation, was, nevertheless, essentially a public institution. It frequently received state aid in one form or another. Moreover, it was established by the state and its control was generally vested in a governing body designated by the state. Self-perpetuating governing bodies came into being only with the nineteenth century.

The relation between the divisions of the school system during the colonial period. A brief survey of the main divisions of the colonial school system — the elementary, the secondary, and the higher — has brought out several important facts. In the first place, it is quite evident that the system as such was, as in the case of the leading European countries, organized on a dual basis. That is, it consisted of two rather distinct branches — the elementary, intended for those who would not go to college, and the secondary, intended for those who might go to college. The only feature which these two branches had in common was that each admitted pupils at the ages of seven or eight, after they had presumably learned to read at home or in the dame school. Thereafter, the two branches were essentially distinct, in spite of the fact that Latin grammar pupils sometimes received their training in writing and reckoning in the elementary schools. It was only toward the close of the colonial period that these branches began to merge, in the sense that the partial completion of the ele-

¹ *Op. cit.*, pp. 14-15.

mentary course became a prerequisite for entrance to the Latin school. It will be recalled that the program which the Boston Latin school adopted in 1789 required all candidates to be at least ten years of age and "well instructed in English Grammar." Our educational ladder obviously began to take form during the latter part of the eighteenth century.

In the second place, the divisions of the colonial school system obviously do not correspond very closely to the divisions of our school system as we know it today. The elementary division, embracing the dame school and the institutions which we designated as elementary schools, was ungraded and indefinite in scope. The secondary division, represented by the Latin grammar school, received pupils at the ages of seven or eight and graduated them at fourteen or fifteen. In other words, the colonial pupil completed his secondary course at about the age that the modern pupil completes the work of the eighth or ninth grades. The higher division, consisting of the college, received the student at fourteen or fifteen and graduated him at eighteen or nineteen. It corresponded, therefore, roughly to the modern four-year high school.

THE EARLY NATIONAL PERIOD

Characteristics of the early national period. In general, the period from the Revolution down to the Civil War was an era of growth and expansion for the American people. At the beginning of the period, a population of some four millions occupied a narrow strip of land between the Appalachian Mountains and the Atlantic seaboard; manufactured articles were either made at home or imported from abroad; there was no machinery; transportation was slow

and laborious; cities were few and small, the six cities having a population of eight thousand or over representing only 3.3 per cent of the population; aristocratic sentiment was still strong, so that the right of suffrage was severely limited by religious and property qualifications; and finally, the new government was, in the eyes of the outside world at least, a questionable experiment.

By the close of the period striking changes had taken place. The population had passed the thirty-one million mark; the national domain extended from ocean to ocean, several states having been organized on the Pacific coast; manufacturing had assumed large proportions, particularly in the northern and eastern sections of the country; many machines had been invented; steamboats were plying busily on a great network of rivers and canals; more than thirty thousand miles of railway had been constructed; cities had greatly increased in number and size, there being in 1860 one hundred and forty-one cities with a population of eight thousand or over, sixteen with a population of fifty thousand or over, and three with a population of two hundred and fifty thousand or over, representing in all 16.1 per cent of the entire population. The right of suffrage had become practically universal; and finally, the new government had not only weathered many storms but had steadily grown stronger and more efficient.

Educational progress. That education should share in the general development of this period was to be expected. Not only did schools multiply in number and expand in scope, but they experienced fundamental and far-reaching changes. At the beginning of the period, education was, outside of New England, still largely a church and private affair. The organization of the school system, too, although

in process of transformation, was as yet essentially aristocratic and dual, one branch being intended for the masses and the other for the classes. By the close of the period, elementary education had generally passed under state control and support, every northern state as well as some of the southern states having established state school systems embracing free tax-supported elementary schools. The public high school and the state university also had made their appearance, and it was evident that these, too, must sooner or later become a part of the newly established state school systems. The elementary schools in the larger cities were generally graded. The organization of the school system was, moreover, no longer based on class distinction. The several divisions of the system — the elementary, the secondary, and the higher — although only the elementary had generally passed under state control and support, had in actual practice come to assume a sequential relationship. In other words, the democratic American ladder principle had definitely made its appearance and was accepted in practice, although the ladder as such was still in the making, the scope of the several divisions being as yet vaguely defined and their relationship uncertain and indefinite.

Schools of the early national period. As indicated earlier, the American public school system originated in New England. By the close of the colonial period this section of the country had gone far toward providing what amounted in essence to state-controlled and tax-supported elementary and secondary education. The colleges, too, although not supported by public taxation, were essentially public institutions. During the early national period the idea of the tax-supported and state-controlled elementary school came to be generally accepted throughout the country, although

state systems were not organized in many southern states until after the Civil War. The idea of the tax-supported and state-controlled secondary school, on the other hand, was kept back for a time by the rise of the academy — an institution which, although it frequently received public aid in one form or another, was most commonly a privately controlled tuition school. The field of higher education came to be divided between two types of institutions — the privately controlled colleges and universities supported by endowments and tuition fees, and the state-controlled and tax-supported state universities.

Elementary schools. During the latter part of the colonial period, the elementary school was most commonly a moving or a divided school. There was, even after the moving school had become the divided school, no clear-cut distinction between the central school and the schools of the outlying sections of the towns except that the former was in session longer. In the course of the early national period all this changed. The decentralizing tendencies which had led to the moving and divided schools in New England, together with the settlement of the West, gave rise to the district school; and the subsequent growth of the cities, brought on by the development of manufacturing and commerce, resulted in the establishment of the graded school.

The district school. It was but a step from the divided school to the district school. All that was needed, once the former had become generally established, was legal sanction. In Massachusetts the district system acquired its legal status during the period from 1789 to 1827. Districts as such were recognized by law in 1789; in 1800 they were given the right to tax themselves for improvements; in

1817 they were made corporations; and in 1827 they were given the right to choose a trustee who was charged with the care of the school property and the selection of the teacher. Aside from the fact that the town authorities examined the teachers and levied the taxes for the support of the schools, the management of the schools was now entirely in the hands of the districts.

In the case of the countless new settlements of the West, practically all of which adopted the district plan by force of necessity, local autonomy was even more complete, since the trustees commonly examined the teachers and raised such funds as were needed for the support of schools. So strongly did the district idea appeal to the loose social organization of the time that cities as well as rural territories were divided into districts. Indeed, it was not until after the middle of the early national period that city districts came to be generally consolidated into unified systems in charge of boards of education and superintendents. The rural district has persisted more stubbornly. In New England the district system was abolished during the last quarter of the nineteenth century, and a number of other states have since followed suit. In the majority of the states, however, the district system continues to persist, though shorn of much of its former autonomy.

During the early national period the district school, outside of cities, was essentially the school of the three R's — reading, writing, and arithmetic. In time, other subjects — such as geography, history, grammar, and spelling — came to be added. Beyond this, the district school was ungraded and indefinite in length. It received pupils of all ages and both sexes. Since the academy — the chief secondary school of the time — had as a rule no rigid entrance

requirements, it was quite possible for pupils to continue their education there, once they had mastered the meager curriculum of the district school. With the coming of state and county supervision and the rise of the graded city school and the public high school, the district school began to assume more definite form, though not to any great extent until after the close of the early national period.

The rise of the graded city school. As indicated earlier, during the major portion of the early national period cities were frequently divided into districts much as was the outlying rural territory. Indeed, it was not until well toward the close of the period that these isolated districts came to be generally consolidated into unified school systems under the control and supervision of boards of education and superintendents. As late as 1860, only twenty-four cities employed city superintendents of schools.

During the early stages of the district system, each of the several districts within a given city frequently maintained merely an ungraded one-teacher school, much like the school of the three R's, referred to above. As the cities grew in population, various adjustments were made. In some cases, the number of districts was increased; in others, additional one-teacher schools were established within the districts already existing; and in still other cases — in some of the older communities, from the very beginning — more teachers were employed as the one-teacher school became inadequate.

The graded school had its rise and development essentially in those cities in which the one-teacher school of the three R's was early discarded, or in which it had never gained a firm foothold, there being little occasion for grading

in cities which adhered to the one-teacher district school. The first step toward the modern graded system was taken when the elementary period was divided into several divisions, designated quite commonly as the primary, the intermediate, and the grammar divisions. Each of these divisions was placed in charge of a different teacher and was, therefore, regarded as a separate class or school. The primary division was often housed separately, sometimes in several buildings, while the intermediate and grammar divisions usually occupied different rooms in the same building. Occasionally, as was customary in Boston, the period above the primary division, known as the English grammar school, was divided vertically into a reading school and a writing school, the two being housed in different rooms of the same building, and the pupils dividing the day between them. All told, it was but a step from the colonial organization of elementary education to that represented by the first stage of our graded system — a step which would have been taken easily and rapidly had it not been for the rise of the district system. The dame school, which had long been receiving an increasing amount of public support, emerged in a perfectly natural manner as the primary division of the public school system; and the town elementary or English grammar school, the scope of which had gradually increased, resolved itself quite naturally into two divisions, the intermediate and the grammar.

The second step toward the modern graded system was taken when the several divisions — the primary, the intermediate, and the grammar — came to be more or less informally subdivided into classes. This step was taken when it became necessary to employ assistant teachers. Hitherto each division had been housed in one large hall or room,

usually in charge of one teacher. At this point, in order that the assistant teacher might be used to the greatest advantage, small recitation rooms were added to the main halls or rooms; and the divisions, which had to some extent been divided into instruction groups even on the one-teacher basis, became more definitely subdivided into classes. The classification was, however, still very informal and quite unlike modern grading practices. The classes, some of which continued to receive instruction from the head teacher in the main hall while others withdrew temporarily to recite with the assistants in smaller rooms, were most commonly groups of pupils who were doing about the same work in a given subject, such as arithmetic or reading. They were, therefore, essentially departmental classes.

The final step toward the modern graded system was taken when the pupils of the several divisions were permanently divided into classes or grades on the basis of age and achievement and placed in charge of separate teachers. The divisions as such now disappeared except in name, their place being taken by the unified graded elementary school. The large halls also disappeared, giving way to smaller classrooms. The curriculum became organized in terms of consecutive units or grades, each representing the work of one year. The elementary school assumed for the first time a definite length. "By 1860," as Bunker points out, "it became clear that the length of the elementary course was to be either seven, eight, or nine years, beginning with the age of 7, 6, or 5, with the preference for the arrangement which is now so general as to be typical — namely, an eight-year course, the child entering in the sixth year and completing the course in his fourteenth

year."¹ The nine-year elementary course, beginning at five and ending at fourteen, prevailed in New England; the seven-year course, beginning at six or seven and ending at thirteen or fourteen, was most common in the South; and the eight-year course, beginning at six and ending at fourteen, was prevalent in other sections of the country.

The evolution of the seven-, eight-, or nine-year elementary school in the course of the early national period was, as might be expected, accompanied by many curricular changes. At the beginning of the period the elementary-school curriculum was quite generally limited to the three R's. Even Boston had not gone beyond writing, arithmetic, reading, spelling, and grammar and composition by 1879. As time passed, striking changes took place. Not only were such new subjects as geography and history added, but the other subjects were enriched and extended. In the case of some subjects — notably spelling, arithmetic, and grammar — the extension went far beyond the needs of the time. Carried to its logical conclusion, this tendency terminated, in the course of the modern period, in a baneful formalism — a formalism in every way opposed to genuine elementary education.

The academy. The academy was the chief secondary educational institution during the early national period. There was of course some overlapping. The Latin grammar school did not disappear all at once, nor did the academy arise over night. All told, however, the influence of the Latin grammar school was negligible after the close of the eighteenth century. The academy gained its earliest stronghold in such states as Massachusetts, New York, Pennsylvania, Maryland, Virginia, and North Carolina.

¹ *Reorganization of the Public School System*, p. 35.

Thereafter, it spread rapidly throughout the rest of the country. The first of the new institutions was the Franklin Academy, opened in Philadelphia in 1751. The first academies established in Massachusetts were the Dumner Academy, opened in South Byfield in 1763 and incorporated in 1782, and the Phillips Academy, opened at Andover in 1778 and incorporated in 1780. During the succeeding decades the number of new academies incorporated in Massachusetts was as follows, according to figures compiled by Inglis:¹

DECADE	ACADEMIES INCORPORATED	DECADE	ACADEMIES INCORPORATED
1780-1790	6	1831-1840	46
1791-1800	11	1841-1850	21
1801-1810	11	1851-1860	19
1811-1820	8	1861-1870	10
1821-1830	32		

In addition, there were many unincorporated academies. It will be observed that the academy movement was, as far as Massachusetts is concerned, at its height during the third and fourth decades of the nineteenth century. The following figures compiled by Dexter,² showing approxi-

PERIODS	APPROXIMATE NUMBER OF ACADEMIES INCORPORATED
—-1800	102
1801-1820	265
1821-1840	449
1841-1860	313
1861-1880	180

¹ *Principles of Secondary Education*, p. 173.

² *History of Education in the United States*, p. 94.

mately the incorporation of academies in eight eastern states (including Massachusetts) in the course of a century, indicate that this holds true for the eastern states generally.

In 1850 there were, according to figures compiled by Inglis¹ and Dexter,² 1,007 academies, incorporated and unincorporated, in the New England states, 1,636 in the Middle Atlantic States, 753 in the North Central states, 1,379 in the South Atlantic states, 1,261 in the South Central states, and 49 in other states — a total of 6,085 academies with 12,360 teachers and 263,096 pupils in the entire United States.

The academy was generally a small school. Only the larger incorporated institutions employed more than two or three teachers. Most of the unincorporated institutions were one-teacher schools. In contrast with the Latin grammar school, which was, in New England at least, essentially a public institution, controlled and supported by the state, the academy was at best only a semipublic institution. It was most commonly controlled by church bodies, private individuals, and self-perpetuating boards of trustees. Its support came chiefly from endowments, state aid, and tuition fees. It was subject to state supervision only in so far as it received state aid. As a matter of fact, New York alone approximated an adequate system of state supervision.

As an educational institution, the academy differed from the Latin grammar school in several important respects. It provided for the education of both boys and girls, through separate or coeducational institutions, while the Latin grammar school made provision for boys only. Moreover, the

¹ *Principles of Secondary Education*, p. 175.

² *History of Education in the United States*, p. 96.

chief aim of the academy was to prepare the pupil for the "great end and real business of living," while the Latin grammar school prepared for college first, last, and always. Since the academy supplanted the Latin grammar school, one of its functions was, of course, to prepare pupils for college, but it did much more than this. As Brown points out :

Academy students who were preparing for college pursued the studies, now slowly increasing in number and definiteness, which their several colleges prescribed. But the notable thing about the academies, as distinguished from the grammar schools, was that they went on adding subjects at their own sweet will, wholly regardless of what the colleges were doing. Sometimes they brought subjects down from the college course ; sometimes they took subjects which most of the colleges did not touch.¹

In contrast with the narrow curriculum of the Latin grammar school, which rarely went beyond Latin, elementary Greek, and a little mathematics, the academy covered at its best a tremendous range of subject-matter, as shown by the following list of subjects reported to the Regents of the University of New York by the academies of that state in 1837 :

Arithmetic, algebra, architecture, astronomy, botany, bookkeeping, Biblical antiquities, biography, chemistry, composition, conic sections, constitution of the United States, constitution of New York, elements of criticism, declamation, drawing, dialing, English grammar, evidences of Christianity, embroidering, civil engineering, extemporaneous speaking, French, geography, physical geography, geology, plane geometry, analytic geometry, Greek, Grecian antiquities, German, general history, history of the United States, history of New York, Hebrew, Italian, Latin, law (constitutional, select revised statutes, criminal, mercantile, Blackstone's commentaries),

¹ *The Making of Our Middle Schools*, p. 232.

logic, leveling, logarithms, vocal music, instrumental music, mapping, mensuration, mineralogy, mythology, natural history, navigation, nautical astronomy, natural theology, orthography, natural philosophy, intellectual philosophy, penmanship, political economy, painting, perspective, physiology, English pronunciation, reading, rhetoric, Roman antiquities, stenography, statistics, surveying, Spanish, trigonometry, topography, technology, principles of teaching.¹

In most cases, however, the small size of the academy placed severe limitations upon the curriculum. Two or three teachers, and in many cases one, could at best teach only a limited number of subjects. With all this, the varied curriculum of the academy reflects in an interesting manner the expanding interests — political, economic, social, and scientific — of the growing republic.

The age of admission to the academy was not as definitely standardized as it had been in the case of the Latin grammar school. Moreover, it changed materially in the course of the early national period. At first, especially in New England and the older states, the entrance age was quite commonly from seven to nine, although older pupils were by no means excluded. As time passed and the elementary school increased in length, the entrance age rose, though not always in proportion, since pupils were not necessarily required to complete the elementary course before entering the academy. During the latter part of the early national period the entrance age to the academy ranged not uncommonly between twelve and fourteen, though there were as a matter of fact no definite upper and lower limits. The length of the academy course was at best indefinite. Those who were preparing for college left whenever they were able to meet the entrance requirements of the institu-

¹ Monroe, Paul, *Principles of Secondary Education*, p. 58.

tions they wished to attend. At the beginning of the early national period, boys commonly entered college at fifteen or sixteen. Toward the close of the period, however, the entrance age had risen materially. At Harvard, for instance, the average entering age for freshmen was seventeen years and seven months in 1856. All told, this meant that boys were entering the academy or preparatory school later on account of the lengthened elementary course, and that they were spending more time there than formerly because of increased college entrance requirements. However, the academy ministered to many who were not preparing for college, and these often remained much longer. As a matter of fact, the better academy and the college frequently overlapped to a considerable extent.

While the academy was the leading secondary institution during the early national period, it was not the only one. During the earlier part of the period the Latin grammar school, as indicated above, continued to furnish secondary education in some communities, and during the last decades of the period the high school, an institution destined to become the second division in our educational system, was in the making — so much so, indeed, that it was quite evident that sooner or later the high school must supplant the academy.

Higher education. By 1800 there were twenty-four colleges in the United States. These were without exception small institutions, the Harvard faculty, for example, being limited to the president, three professors, and a few tutors. All told, the twenty-four institutions represented an enrollment not exceeding two thousand. In addition, four medical schools had been established. Not one of these higher institutions was open to women. By the close of

the early national period in 1860, 246 colleges and universities had been established, seventeen of these being state institutions. In addition, a considerable number of professional schools — schools of law, medicine, theology, dentistry, pharmacy — had been founded. All told, some sixty institutions of higher learning — for the most part separate institutions, since the principle of coeducation had been accepted by colleges only in rare instances — were open to women.

The internal development of the college, although significant, had not been striking. The college curriculum of the first two decades of the nineteenth century was still much the same as that of colonial times. All students were required to take practically the same course. The work of the first three years consisted of Latin, Greek, and mathematics. During the fourth year, philosophy occupied an important place. Some attention was given also to natural science, usually during the last two years.

During the succeeding decades, the rapidly developing natural and social sciences and the modern languages made increasingly insistent demands for adequate recognition in the college curriculum. But the established order, entrenched by centuries of tradition, capitulated slowly. Meanwhile the elective system was in the making. As early as 1825, with the opening of the University of Virginia, Jefferson, influenced by French practices, introduced an elective system. The university was organized in schools or departments — ancient languages, modern languages, mathematics, natural philosophy, natural history, anatomy and medicine, and moral philosophy. Each student matriculated in such school or schools as he chose. He received the degree only after he had “acquired an accurate

and extensive knowledge" of the field of his choice and after giving "satisfactory proof of his ability to write the English language correctly."

During the next ten years George Ticknor, who had been in intimate contact with Jefferson, championed the same cause at Harvard. But the opposition to the elective principle was so pronounced that its general adoption was delayed until after the close of the early national period. All told, the American college curriculum, although enriched by the addition of new subjects, remained, therefore, uniform and prescribed throughout the period in question. In some instances the insistent demand for curricula more intimately related to life led to the establishment of special schools, such as Rensselaer Polytechnic Institute and the Lawrence and Sheffield Scientific Schools.

The relation between the divisions of the school system during the early national period. During the colonial period, as indicated earlier, the organization of our school system conformed essentially to the European principle of class education. In consequence we had to all intents and purposes a dual school system, one branch being intended for those who would probably be able to attend college and the other for those who would not. By the beginning of the early national period these two branches had clearly begun to merge. In other words, the elementary branch, hitherto intended chiefly for those who would not be able to go to college, had come to be in part a prerequisite to the secondary school which prepared for college. This is clearly shown by the fact that the Boston Latin school required all candidates for admission, according to the program of 1789, to be at least ten years old and well instructed in English grammar. While not nearly all sec-

ondary schools were as yet living up to the standards set by the Boston Latin school, the principle that secondary education presupposes a considerable amount of elementary training came to be more and more accepted in the course of the early national period. Moreover, the public elementary school, which was being universally established in the course of this period, came to supply this training, the pupil passing directly from the elementary school to the academy, and thence to the college.

As indicated earlier, the relationship between these three divisions of the school system was as yet very loose. The pupil was not necessarily required to complete the elementary course before entering the academy, nor did he necessarily complete the academy course before entering college. All he did was to meet the entrance requirements of the secondary and higher institutions, and in the case of the academy these were loose at best. With the coming of the public high school and the state university, the relationship between the several divisions of the school system became more definitely standardized, but only in the course of the modern period. With all this, and in spite of the fact that the secondary and higher divisions were still for the most part under private and semiprivate control, the American ladder principle of school organization had definitely supplanted the European principle of school organization on the basis of class distinction.

Of the several divisions of the school system, the elementary had taken the most definite form. Its length in cities was generally seven, eight, or nine years, the pupil completing the course at the age of about fourteen. The secondary division, in so far as it was represented by the academy, was still rather indefinite in length, overlapping on the one

hand the elementary school and on the other hand overlapping the college. However, it had come to concern itself quite definitely with the education of the adolescent. The higher division, represented by the college, which had during the colonial period concerned itself primarily with the adolescent age, now received individuals at seventeen or eighteen and graduated them at twenty-one or twenty-two. The university as such had not appeared on the scene as yet.

THE MODERN PERIOD

Characteristics of the modern period. The growth and expansion, so characteristic of the early national period, gained added momentum during the modern period—the period from the Civil War down to the close of the first decade of the twentieth century. But it was more than an era of growth and expansion. It was an era of marvelous transformation. The population practically doubled in the course of the period. The number of cities having a population of eight thousand or over increased from 141 to 782; those having fifty thousand or over, from 16 to 109; and those having two hundred and fifty thousand or over, from 3 to 19. The urbanization movement went so far, in fact, that less than 45 per cent of the population were living in rural districts and unincorporated villages in 1910. The growth of cities was of course conditioned by the development of industry and commerce, both of which were almost completely transformed in the course of the modern period through the influence of science and corporate action. Agriculture also was revolutionized through science, but the principle of corporate action was not as widely resorted to as in other fields of endeavor. In other walks of life,

too, science and invention went on apace, giving us new controls over our environment, new interests, and new diversions.

Schools of the modern period. Along with material development came educational change and progress. The states which had not placed the elementary school under state control and public support at the beginning of the period did so in rapid succession after the close of the Civil War. The public high school, supported by general taxation and controlled by the state, supplanted the private or semiprivate academy and became the second division of our educational ladder. The state university and the state college came to assume the leadership in higher education in the majority of states and supplied the final division of the ladder. Once completed, the educational ladder became accessible to an ever increasing proportion of our population. Elementary education became generally compulsory within certain age limits, and the attendance upon high schools, colleges, and universities increased by leaps and bounds. In consequence, the amount of education which an individual received rose amazingly. According to estimates of the Bureau of Education, the average number of days of schooling which each individual of the population had received rose from 434 in 1860 to 1,080 in 1910. Finally, each of the several divisions of our school system underwent striking, if not revolutionary, changes from the standpoint of both content and procedure.

The elementary school. At the beginning of the modern period all northern states had made provision for tax-supported and state-controlled elementary schools. The southern states had not generally reached this point. By 1870, however, they had without exception made consti-

tutional and legislative provision for such schools, though the actual establishment of the schools was in many cases delayed by post-war conditions until after the reconstruction period. Cities throughout the country made especially rapid progress after the close of the war in matters relating to the organization and administration of elementary schools. In 1860 only twenty-four cities employed superintendents of schools; by 1876 more than 80 per cent of the cities having a population of eight thousand or over employed such officials; and by the close of the period in 1910 not only were superintendents universally employed, but the supervisory staffs of city school systems had assumed tremendous proportions.

At the beginning of the modern period the elementary schools in the larger cities were generally graded. In the decades which followed, the graded plan was extended to the smaller cities and towns, and even, as far as possible, to rural districts. Beyond this, the elementary school curriculum underwent striking changes in content. Methods of procedure also were revolutionized. At the beginning of the period the elementary curriculum was generally limited to reading, writing, spelling, language and grammar, arithmetic, geography, and United States history. The methods employed in the teaching of these subjects were extremely formal. As time passed and the school year lengthened, the content of the formal subjects — reading, language and grammar, writing, spelling, and arithmetic — was greatly increased, not infrequently far beyond the needs and interests of children. The methods of teaching these subjects, on the other hand, grew steadily less formal. Geography and history were almost completely revolutionized in content and method. In addition, their

scope was greatly increased. Beyond this, many new subjects — literature, nature study, music, drawing, manual arts, physiology and hygiene, physical training and play — were added. The inevitable consequence, by the close of the period, was a greatly enriched but badly overcrowded elementary-school curriculum.

The high school. In the course of the modern period the public high school, an institution which had begun to develop during the early national period, gradually supplanted the academy as the chief secondary educational institution. The first high school was established in Boston in 1821. It was known as the English classical school until 1824, and thereafter as the English high school. At this time the English grammar school received boys at the age of seven, after they had learned to read, and kept them until fourteen, unless they left at twelve or earlier to enter the Latin grammar school or dropped out otherwise. A subcommittee appointed by the school committee to consider the desirability of establishing an English classical school felt that the boys who later entered the mercantile and mechanical occupations were wasting much of their time in the English grammar and writing schools, since they could easily master the common branches, to which seven years were now being devoted, in five years, and give their time thereafter to subjects which would prepare them more effectively for an active life. Accordingly, they recommended that the public school system be expanded to include an English classical school to furnish a higher English education for boys twelve to fifteen years of age. The following curriculum was adopted:

First Class: Composition; Reading from the most approved authors; Exercises in Criticism, comprising critical analyses of the

language, grammar, and style of the best English authors, their errors and beauties; Declamation; Geography; Arithmetic continued.

Second Class: Composition; Reading; Exercises in Criticism; Declamation; Algebra; Ancient and Modern History and Chronology; Logic; Geometry; Plane Trigonometry, and its applications to mensuration of heights and distances; Navigation; Surveying; Mensuration of Surfaces and Solids; Forensic Discussions.

Third Class: Composition; Exercises in Criticism; Declamation; Mathematics; Logic; History, particularly that of the United States; Natural Philosophy, including Astronomy; Moral and Political Philosophy.¹

In 1826 a similar high school was established for girls. This proved so popular that the authorities deemed it best, two years later, to discontinue the school and provide in its place improved facilities in the English grammar and writing schools.

In 1827 Massachusetts passed a law requiring all towns and districts of five hundred families to establish schools in which should be taught United States history, book-keeping by single entry, geometry, surveying, and algebra, and, in the case of cities or towns having a population of four thousand, the Latin and Greek languages, history, rhetoric, and logic. These schools came to be generally designated as high schools. They were usually open to both boys and girls. Although opposed by a variety of interests, the new high schools spread rather rapidly. Inglis estimates that there were at least sixty-three in Massachusetts by 1861.² Having gained a foothold in Massachusetts, the new institution spread to other states. According to approximate figures cited in the report of the Commis-

¹ From *Report of Subcommittee*, as cited by Inglis in *Principles of Secondary Education*, pp. 186-187.

² *Principles of Secondary Education*, p. 192.

sioner of Education for 1904, there were 321 high schools in the country by 1860. More than half of these were located in Massachusetts, New York, and Ohio. On the whole, however, the growth of the high school was long relatively slow, largely because of the determined opposition from the private and semiprivate academies and from persons opposed to public taxation for the support of schools.

As time passed, however, the advantages of the free public high school came to be appreciated increasingly. Court decision upon court decision — after the famous decision of the supreme court of the state of Michigan in the Kalamazoo case in 1872 — upheld the right of the community and the state to tax themselves for the support of public high schools. In consequence, the public high school entered upon a period of rapid growth, so rapid that it was clearly the dominant educational institution by 1890. Inglis estimates that 68.13 per cent of the pupils attending secondary schools at that time were in public high schools.¹ All told, there were, according to the report of the Commissioner of Education, 2,771 public high schools with 8,270 teachers and 211,596 pupils during the school year 1890 — 1891.² During the next two decades the growth of the high school was even more phenomenal. By the close of the modern period, in 1910, the percentage of secondary pupils in public high schools had increased to 88.63.³ There were at this time 10,234 public high schools with 45,167 teachers and 984,677 pupils.⁴

¹ *Principles of Secondary Education*, p. 197.

² *Report*, 1916, Vol. II, p. 449.

³ Inglis, *Principles of Secondary Education*.

⁴ *Report of Commissioner of Education*, 1916.

The early high school differed from the academy primarily in the fact that it was controlled by public officials and supported by general taxation. The academy, it will be recalled, was usually controlled by private officials and supported in the main by tuition fees, endowments, and grants. The curricula of the two institutions did not differ materially at first, aside from the fact that the academy frequently offered courses on religion while the high school limited itself to secular courses. Both institutions early recognized the dual function of training for active life and preparing for college entrance. In consequence, each offered as a rule a rather large variety of subjects, a much greater variety than was required for college entrance. The number of curricula, on the other hand, was limited, there being usually a group of studies for those expecting to enter college and another for those who were completing their education in the secondary school. The net result was that a curriculum frequently included a large number of short and superficial courses.

During the last quarter of the nineteenth century, striking changes took place. Normal schools, state colleges, and state universities multiplied rapidly and took over many of the functions by way of preparing individuals for active life which the academies and high schools had been attempting to perform. In consequence, the college preparatory function of the secondary school came strongly to the front for a time. The few academies which remained were almost without exception converted into college preparatory institutions. The courses of study and curricula of high schools were standardized more and more, unfortunately to too great an extent from the standpoint of their college preparatory function. One of the greatest standardizing

agencies was the report of the Committee of Ten on Secondary Studies (issued in 1893), together with the reports of the conferences arranged by the committee. The recommendations of the committee and the conferences determined in a large measure the subjects and the content of the subjects which were to receive the major emphasis in the high schools for several decades to come. The subjects thus approved were further arranged in the form of four suggested curricula — the Classical, the Latin-Scientific, the Modern Language, and the English. Although made by representatives of both secondary and higher institutions, the recommendations were on the whole determined by college preparatory considerations, under the assumption, however, that those subjects and curricula which prepare most effectively for college also prepare best for life. The recommendations exerted in the main a very wholesome influence upon the development of the high school.

The accrediting system supplied another powerful standardizing influence. As early as 1871 the University of Michigan began to accredit high schools on the basis of inspection on the part of the faculty, so that approved graduates could enter the university without further examination. Subsequently the accrediting plan spread to all states having higher state institutions. Private institutions, with the exception of some of the older eastern colleges and universities, also adopted the plan quite generally. More recently the function of inspecting high schools has passed increasingly into the hands of special university examiners, or representatives of state departments of education, or the two combined. In 1901 the North Central Association of Colleges and Secondary Schools formed a Commission

on Accredited Schools. As an interstate organization, this has contributed much toward the standardization of high school courses of study and curricula. Similar work is being done by the Southern Commission on Accredited Schools, formed in 1911 by the Association of Colleges and Secondary Schools of the Southern States. The New England College Entrance Certificate Board has indirectly exerted much the same influence in the New England states since its organization in 1902. In a measure the same thing may be said of the College Entrance Examination Board organized in New York in 1901.

While these standardizing agencies have on the whole been beneficial, they have at times, because of their college-preparatory bias, seriously interfered with the social mission of the high school. Until well toward the beginning of the twentieth century, practical subjects were to too great an extent excluded from the high-school program of studies, either because the colleges frowned upon them or because communities were unable to provide them after having met the *sine qua non* of the accredited college-preparatory high school. Moreover, the academic subjects accepted for college entrance assumed, under the influence of the colleges, a severely logical and formal character, altogether too much so from the standpoint of the needs, interests, and capacities of the adolescent.

Higher education. Colleges and universities multiplied rapidly during the modern period, from sixty to seventy being established each decade. Many of these were of course small private institutions, limited in scope and influence. However, the number included also the state universities which were being founded everywhere outside of New England and some of the Middle Atlantic states;

the state agricultural and mechanical colleges, which, after the passage of the Morrill Act in 1862, found their way into every state, either as separate institutions or as parts of existing institutions; and some endowed private institutions of wide scope and broad influence. Even more striking than the increase in numbers was the growth of the institutions in question. While complete data are not available for the entire period, it is very obvious that the increase in faculties and students far outstripped the increase in the number of institutions and the growth in the population of the country. In other words, in the course of the modern period higher and professional education became increasingly accessible to an ever growing proportion of our population.

The most significant development of the modern period concerned, however, the internal growth and transformation of these institutions. At the beginning of the period the college with its one prescribed curriculum was still the chief medium of higher education. In some instances two parallel curricula were offered, and in a few cases separate scientific or technical schools had been established. Such departures were, however, the exception rather than the rule. Professional education too, although generally developing, was in its infancy. But the old order was clearly doomed, partly because of experiments with specialized courses and elective studies which had been under way for some time at such institutions as the University of Virginia and Harvard University, and partly because university professors were being educated in Germany under a very different system of higher education. The first departure from the established order involved the organization of several more or less distinct college curricula, each

leading to a different degree. Then came the elective system with almost unlimited opportunities for differentiation. Once embodied in practice, this principle opened the doors of higher institutions to almost every conceivable subject.

In the wake of these changes came the graduate school, which involved an extension of the college course of all the way from one to four or more years. In the professional schools there was at the close of the period the greatest possible diversity in practice. Some of these were graduate schools; others presupposed the partial completion of the college course; still others presupposed no college work whatsoever.

The relation between the divisions of the school system during the modern period. By the beginning of the modern period the principle of our educational ladder had been definitely accepted. It had, moreover, been partially embodied in the educational practices of the preceding period. With the coming of the public high school and the state university, the divisions of the ladder were essentially complete. The chief problem thereafter was to articulate them. This was accomplished in a measure in the course of the modern period. The high school came to be generally regarded as a four-year extension of the graded seven-, eight-, or nine-year elementary school. The articulation of the elementary and secondary divisions of the ladder was therefore, on the surface at least, a relatively simple matter, especially in cities and towns where the schools were uniformly graded and supervised. Here the transition from the last grade of the elementary school to the first year of the high school came to be much the same as the transition between other grades. In rural communities and small towns, where the schools were not as definitely

graded nor as well supervised, the transition was more difficult. In actual practice it came to be generally effected through the medium of uniform state or county examinations.

Until 1871, when the University of Michigan began to accredit high schools, students were admitted to college only upon passing entrance examinations. This did not necessarily presuppose the completion of a secondary course. Subsequently the accrediting plan in some form or other came to be generally accepted, not only by state institutions but by many private colleges and universities as well. Since the accrediting plan presupposed the completion of a standard four-year high school course on the part of the student recommended for college entrance, the high school came to be definitely linked with the college during the last decades of the modern period. This accomplished, the educational ladder was essentially complete, though far from perfect.

The ladder now embraced an elementary division, seven to nine years in length; a secondary division, four years in length; and a higher division, four to eight or more years in length. A normal child entering school at six could now be expected to complete the elementary course at fourteen, graduate from high school at eighteen, receive the bachelor's degree at twenty-two, and qualify for one of the learned professions at twenty-five, twenty-six, or twenty-seven, depending upon the extent of the professional curriculum. In actual practice the average individual has found it rather difficult to complete his program on schedule time, as shown by the fact that the average entrance age to American colleges has passed the eighteen-year mark. At Harvard University it had actu-

ally reached 19.4 years.¹ Such was our educational ladder at the close of the modern period. Its shortcomings we shall set forth in succeeding chapters.

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CHAPTER II

THE ORGANIZATION OF SCHOOL SYSTEMS IN EUROPEAN COUNTRIES

Before proceeding to a discussion of the reorganization of the American school system, the evolution of which we have been tracing, we must examine certain aspects of the organization of European school systems. The following are of most immediate concern to us: (1) the essentially dual character of these systems; (2) the relatively long period of time which they allot to secondary education; (3) the tendency on their part to provide middle schools for the early adolescent period; and (4) the comparatively short and economical educational programs which they represent.

THE DUAL CHARACTER OF EUROPEAN SCHOOL SYSTEMS

In characterizing the American school system we frequently had occasion, by way of contrast, to refer to the essentially dual character of European school systems. It was pointed out that these systems consist of two branches, one intended for the masses and the other for the classes. The former embraces elementary education and a certain amount of adolescent or secondary education, chiefly civic and vocational; the latter includes elementary, secondary, and higher education. In some of the larger European countries, where class distinction is still rather marked, these two branches of the school system are essentially separate and distinct from the very beginning;

so much so, indeed, that pupils receive as a rule even the rudiments of their vernacular training in separate institutions, although transfers from the lower to the upper branch are quite possible during the earlier years. In some of the smaller countries of northern Europe, where class distinction is not so marked, the two branches begin to diverge only upon the close of a common elementary period from four to six years in length. The schools of the branch intended for the masses are usually free, at least during the elementary period; those of the upper branch, on the other hand, charge tuition from the very beginning, although they are in part supported by the state and the community. The schools of both branches, aside from purely private institutions, are usually under state control and supervision.

The French and English school systems as examples of the dual plan of organization. The French and English school systems offer excellent examples of the dual plan of school organization. Each of these systems consists of two branches which are essentially separate and distinct from beginning to end. It is of course quite possible for pupils to pass from the lower to the upper branch throughout most of the elementary period, and a considerable number actually make such transfers, especially in England. As a matter of fact, however, the upper classes do not send their children to the free elementary schools of the lower branch of the school system. Such a practice would be a violation of social convention and counter to good form. In consequence, most of the children destined to complete standard courses in the secondary and higher institutions of these countries receive their elementary training either in schools which are an integral part of the upper branch of the school systems or in private schools. Finally, it

must be borne in mind that such transfers as are affected from the lower to the upper branches are usually made only on the strength of rather severe competitive examinations.

The French school system. The French boy — we shall use boys' schools as examples throughout, since they are more fully standardized than the schools for girls — who belongs to the lower or middle classes enters the *école primaire élémentaire* at the age of about six, usually after having spent some time in either the *école maternelle* or the *classe enfantine*. At the age of twelve he may take the examination for the *certificat d'études élémentaires*. After he has received this certificate several alternatives present themselves if he wishes to continue his education: He may transfer to the first cycle of the secondary schools of the upper branch of the school system; he may enter a vocational or a technical school; or he may, as he does most commonly if he continues in school, enter the *école primaire supérieure* for a two- or three-year course. If he enters the *école primaire supérieure*, he will pursue a prescribed course during the first year; thereupon he may choose a general, an industrial, a commercial, or an agricultural curriculum. If he chooses the general curriculum, he may upon its completion transfer to the science-modern-language division of the second cycle of a *lycée* or *collège*. Upon the completion of any of the other curricula, he may under certain conditions continue his education in higher vocational and technical schools. While the French boy may transfer from the lower to the upper branch of the school system all along the line up to the age of at least fifteen, he does so rather rarely in actual practice — and this in spite of the fact that the government will aid him if he represents ex-

ceptional ability — probably in part at least because the curricula of the *lycées* and *collèges* do not appeal to him.

The boy who belongs to the upper classes usually enters the *lycée* or *collège* at the age of about seven.¹ He spends two years in the *division préparatoire* and two in the *division élémentaire*. The curricula of these two divisions do not differ materially from the curriculum of the first four or five years of the *école primaire élémentaire*, aside from the fact that the curriculum of the *division élémentaire* allots two hours per week to a modern foreign language. Having completed the work of the *division élémentaire*, the boy enters upon the first cycle of the secondary school in a *lycée* or *collège*. This extends over a period of four years. Here he has the choice between two curricula or divisions — one requiring Latin and the other not. After completing

¹ This account of the educational progress of the French boy who attends a *lycée* or a *collège* is based on the program of M. Georges Leygues, which was in effect from 1902 to 1923, when the reform program of M. Léon Bérard temporarily supplanted it. According to the latter the curriculum of the first cycle was the same for all. Latin was required from the outset, and Greek was compulsory beginning with the third year. The remainder of the curriculum consisted of French, history, geography, modern foreign languages, mathematics, natural sciences, and drawing. The second cycle provided three curricula: the classical, the modern, and the modern with Latin. All who wished to present themselves for the *baccalauréat* were required to pass an examination in Latin and Greek leading to the *certificat d'études classiques* either at the close of the first cycle or at the same time as for the *baccalauréat*. When M. François Albert became Minister of Public Instruction in August, 1924, he "issued as a temporary measure a decree modifying the decree of May 3, 1923, and reintroducing modern language classes (Section B) for the first and second years of the course." This meant in substance for the time being practically a return to the old program. What future developments will be remains to be seen. For an excellent account of the whole situation consult: I. L. Kandel, *The Reform of Secondary Education in France*. Teachers College, Columbia University, New York, 1924. See especially pp. 13-28 and 156.

this cycle he enters upon the work of the second cycle, which extends over a period of three years and offers four curricula or divisions — the classical, the Latin-modern-language, the Latin-scientific, and the science-modern-language. The boy's choice will depend somewhat upon the curriculum which he pursued during the first cycle. Having completed the second cycle, he takes the examination for the baccalaureate degree. Upon receiving this degree, at the age of about eighteen, he may enter a higher institution — most commonly one of the universities. Here he will usually spend from three to six years in professional or technical training, or in specialized work in letters or sciences.

The English school system. The English boy who belongs to the lower or middle classes enters the elementary school at the age of about seven, after having spent some time in an infant school. If he makes regular progress, he may complete the seven grades by the age of fourteen. From fourteen until eighteen — once the Act of 1918 is put into effect — he will attend a continuation school during certain hours of the day. However, the boy may transfer, on the strength of a rather severe examination, from the elementary school to a higher elementary school — or, in the case of some of the cities, to a central school — at the age of about twelve. The higher elementary school offers a three-year course, general and vocational in character. The central schools offer curricula with a commercial or an industrial bent or both. These curricula usually extend over three or four years. Upon graduating from a higher elementary or a central school, the boy may in exceptional cases receive a certain amount of higher technical training.

If the English boy wishes to transfer to the upper branch

of the school system he may do so, most commonly between the ages of nine and twelve. If the transfer is made at the age of about nine he will enter one of the private preparatory schools, where he will spend some three years in preparation for one of the secondary schools, most likely one of the schools not on the grant list. If the transfer is made at the age of about twelve he will enter the secondary school directly, in this case one of the schools on the government grant list. The Board of Education requires the grant schools to keep open (with tuition free) approximately 25 per cent of the places, for exceptional children transferred from the elementary schools on the basis of competitive examinations. As a matter of fact, considerably more than half of the pupils in the grant schools come from the elementary schools, the majority paying tuition fees. It must be borne in mind, however, that the graduates of the grant schools rarely reach Oxford and Cambridge, the great universities where the majority of English leaders are trained.

The English boy who belongs to the upper classes receives the rudiments of his elementary training most commonly in some private school. At the age of about nine he enters one of the private preparatory schools, where he remains up to the age of approximately twelve, when he enters one of the secondary schools. If he belongs to the more exclusive classes, he will in all probability enter one of the great endowed institutions known as "public schools." If he belongs to a less exclusive class, he will most likely enter a grant school or one of the lesser private institutions. In any event, he will spend some six years, or up to the age of about eighteen, in the secondary school. Having completed his secondary course, he may, if he wishes to continue his

education, take the qualifying examination to one of the universities. If he receives his secondary training in one of the public schools, he will most likely enter one of the older universities — Oxford or Cambridge. If he comes from one of the lesser secondary schools, either grant or private, he is more likely to enter one of the more recent civic universities. If he enters the university with the intention of doing serious work, he will spend three or four years with a course which is essentially pre-professional. This course, which leads incidentally to the baccalaureate degree, is more specific than the American college course but not as specialized as our professional courses. It must, therefore, be supplemented by a certain amount of strictly professional and technical training.

The Scotch and Danish school systems as examples of the modified dual plan of school organization. In some of the smaller countries of northern Europe, where class distinction is not so marked, the dual plan of school organization has been modified to a considerable extent. In these countries all secondary courses follow generally upon a common period of elementary training. While there is nothing to prevent the upper classes from sending their children to private elementary schools, the great majority of the children who ultimately enter the universities receive their elementary training in the public elementary schools.

The Scotch school system. The Scotch boy, more or less irrespective of the class to which he belongs, enters the primary school at the age of about five and remains until twelve. At this point he enters upon the intermediate-school period, which extends from twelve to fifteen. The work which he does during this period will depend to a considerable extent upon his probable future. If he expects

to leave school at the age of fifteen, he will pursue a supplementary curriculum especially adapted to the needs of such pupils; if he expects to enter continuation classes in the arts and crafts at the close of the intermediate period, he will pursue a supplementary course especially adapted to pupils of that type; and if he expects to enter a regular secondary school at the conclusion of his intermediate studies, he will pursue a general course in one of the intermediate schools. If he chooses the general course, he will enter the secondary school at fifteen or sixteen, where he will spend at least two years in pursuit of the curriculum of his choice. Upon the completion of the secondary course he may present himself for the entrance examination to one of the universities.

The Danish school system. The Danish boy also, rather irrespective of the social class to which he belongs, enters the elementary school at the age of six or seven. If he expects to join the rank and file of the workers, either in the country or in the city, he may continue in this school until fourteen. At this point he will leave school and become an apprentice in one of the trades or an employee on the farm. After serving in this practical capacity some three or four years, or up to the age of eighteen, he may enter one of the folk high schools to continue his education, both practical and cultural, for one or two terms approximately six months in length.

If the prospective tradesman or farmer, whose probable educational program we have just outlined, is ambitious and in favorable economic circumstances, he may leave the elementary school at the age of about eleven and enter the middle school or *mellemskole*. After spending three years in this, he may enter the lower vocational

schools, which will prepare him rather specifically for the occupation he wishes to enter. If he desires, and if circumstances permit, he may instead complete the four-year course of the *mellemskole* and take in addition the one-year course known as the *realclasse*. At this point, or at the age of about sixteen, he may take the *realexamen* and, upon passing this, enter one of the higher vocational schools.

If the Danish boy wishes to prepare himself for one of the higher technical or professional callings, he will leave the elementary school at the age of about eleven. Along with the boy referred to above, he will enter the middle school, which he will complete at fifteen. At this point he will enter the gymnasium, where he will pursue a three-year classical, modern, or scientific course. Having completed this at the age of about eighteen, he will take the entrance examination to one of the higher institutions — the university or the school of technology.

THE RELATIVELY LONG PERIOD OF TIME ALLOTTED TO SECONDARY EDUCATION IN EUROPEAN COUNTRIES

The American public school system, when it reached approximately its final length toward the close of the modern period, represented an elementary period extending commonly over eight years and a secondary period extending over four years. In this respect it stood in marked contrast to the leading European systems, which were, in the case of the upper branch, allotting, if anything, more time to the secondary than to the elementary period. In large part this difference in time-allotments arose from the fundamentally different character of the two types of school systems. The democratic American ladder system faced

the task of providing through one institution a suitable elementary education for all classes. It had to be at once a finishing school for those who would drop out at the end of the compulsory school period and a preparatory school for those who would enter high school. It could not, according to the point of view prevalent at that time, provide for early differentiation and retain at the same time its intrinsically democratic character. It was essential that the door of the high school should remain open to every American child as long as possible. The inevitable consequence was a long elementary and a short secondary school period. The essentially undemocratic dual European school systems faced no such problem. It was the specific purpose of the lower branches of these systems to furnish a finishing education to the children of the masses. The upper branches were, therefore, left free to shape their own elementary courses. This they did — largely with special reference to the secondary courses which were to follow. In consequence, the elementary courses of the upper branches are relatively short, and what is more, there is often no very clear-cut dividing line between the elementary and the secondary courses. The two often shade into each other almost imperceptibly.

On the whole, there is in evidence today a strong tendency among the leading school systems, both in and out of Europe, to regard the age of twelve as the approximate dividing line between elementary and secondary education. In the case of the upper branches of the school systems, it is coming to be the general practice, even in the case of those systems which still introduce secondary subjects at the age of nine or ten, to admit pupils from the lower branches to at least some of the curricula up to the

age of twelve. In the case of the lower branches of these school systems, there is a pronounced tendency to terminate elementary education at twelve and to provide thereafter, up to the age of about eighteen, a suitable type of secondary education, chiefly civic and vocational in character. In the case of those countries which are evolving ladder school systems, there is likewise a marked tendency to provide for a common elementary education up to about twelve, and thereafter for differentiated secondary education up to approximately eighteen.

The English boy, if he belongs to the upper classes, usually enters the secondary school at the age of twelve and leaves at about eighteen; if he belongs to the lower or middle classes, he may leave the elementary school at about twelve and, unless he transfers to the upper branch of the school system, enter a higher elementary or a central school, or he may do continuation work, which will be compulsory up to eighteen when the provisions of the Education Act of 1918 are enforced. The French boy who belongs to the upper classes usually enters upon the work of the first cycle of the *lycée* or *collège* at about eleven and receives his baccalaureate at eighteen. The boy who belongs to the lower and middle classes may take the examination for the *certificat d'études élémentaires* at twelve and, unless he happens to transfer to the secondary schools of the upper branch of the school system, may thereupon enter the *école primaire supérieure* or one of the technical or vocational schools.

In the case of the school systems of the smaller countries of northern Europe — notably Scotland and the Scandinavian countries — where it has become customary to educate practically all children in a common elementary school, the elementary period tends to terminate at the age of

eleven or twelve. At this point differentiation begins. The boy either continues for several years in the elementary schools with a course supposedly rather specifically adapted to his probable station in life, or he enters upon a more or less differentiated course in a middle school. If he continues in the elementary school, he will, upon the completion of his course or sometime thereafter, receive a certain amount of continuation training. The best educational thought of these countries favors continuation education — civic, cultural, and vocational — up to the age of eighteen. If he enters the middle school, he may later enter the upper secondary schools to continue his secondary education — liberal, technical, or vocational — up to the age of about eighteen.

THE MIDDLE SCHOOL IN EUROPEAN SCHOOL SYSTEMS

As indicated above, secondary education in Europe generally covers the period from eleven or twelve to about eighteen. Secondary schools extend, therefore, over a period of at least six years. This is particularly true of the secondary schools of the upper branches of the school systems — the secondary schools which lead directly to the universities. In a measure — in so far at least as higher elementary, vocational, and continuation schools are becoming available for the children of the masses — it is coming to be true also of the adolescent education carried on in connection with the lower branches of the school systems. In actual practice, however, this rather long secondary period does not necessarily imply a continuous and unitary educational program — not even in the case of the secondary schools of the upper branches of the school systems. On

the contrary, the work of the period is more often organized in the form of two units or schools — one extending over the first three or four years, and the other over the last two or three. We shall designate the former as middle schools. In the case of the school systems which are organized on the dual plan, these schools represent either upward extensions of the elementary schools for the masses or the first three or four years of the secondary schools which lead to the universities. In the case of those school systems which are organized on the modified dual plan — systems in which differentiated secondary education follows upon a common elementary period — the middle schools are essentially transition schools. They receive pupils from the elementary schools and, later, upon the completion of courses either general or more or less special, they pass them on to the upper secondary schools or to continuation schools, where the courses are more highly specialized.

The English higher elementary and central schools as examples of the middle schools. In England the middle schools represent, in so far as they exist, an upward extension and differentiation of the elementary school of the lower branch of the school system. The regular secondary schools, which are associated with the upper branch of the school system, represent a program which is essentially continuous, extending as it does from the age of twelve to about eighteen. The higher elementary schools receive pupils from the fifth grade on the basis of a special examination, usually at the age of about twelve, and keep them until fifteen or sixteen. The curriculum is for the most part general, consisting of such subjects as English, mathematics, geography, history, drawing, and manual arts. The central schools represent a more recent departure and

definite unit of work, with more pronounced opportunities for differentiation and specialization.

The supplementary classes and intermediate schools of Scotland as examples of the middle school. When the Scotch boy completes the primary school at the age of about twelve, he enters upon an intermediate period of training. The course which he selects depends to some extent upon his plans for the future. If he expects to leave school at fourteen or fifteen, he will enter a supplementary class or course especially adapted to such cases; if he expects at the close of the intermediate period to enter continuation classes in preparation for the arts and crafts, he will enter another class or course especially adapted to such cases; if he expects to complete a regular secondary course, he will enter an intermediate school, where he will pursue a three-year course consisting mainly of English, social sciences, natural sciences, foreign languages, mathematics, drawing, and industrial subjects. Upon the completion of this, he will receive an intermediate certificate which will admit him to the regular secondary school, where he may pursue a more or less specialized course extending over two years.

The Norwegian *middelskole* as an example of the middle school. The Norwegian boy may leave the primary school at the completion of the fifth grade, at the age of about twelve, and enter upon a four-year course in the *middelskole*. If he leaves the primary school two years later, after completing the seventh grade, he may still enter the *middelskole* and complete the course in three years, losing thus only one year. In the *middelskole* he will pursue a course consisting mainly of Norwegian, foreign languages, social sciences, natural sciences, mathematics, drawing, religion, manual arts, and gymnastics. Upon the completion of this

course, he may enter the gymnasium for a more or less specialized course extending over three years or he may enter one of the higher technical schools.

The Danish *mellemsskole* as an example of the middle school. The Danish boy may likewise leave the primary school at the age of about eleven and enter upon an intermediate course in the *mellemsskole*, usually four years in length. The course consists largely of Danish, modern languages, social sciences, natural sciences, mathematics, drawing, religion, music, and gymnastics. At the end of the third year, the boy may leave the *mellemsskole* and enter one of the lower vocational schools. At the end of the fourth year, upon the completion of the regular course, he may enter the gymnasium, where he will spend three years with a more or less specialized course. If he expects to enter the middle vocational schools in place of the gymnasium, he will remain in the *mellemsskole* a fifth year.

THE COMPARATIVELY SHORT AND ECONOMICAL EDUCATIONAL PROGRAMS OF EUROPEAN SCHOOL SYSTEMS

As indicated earlier, once the American educational ladder was completed a normal child entering school at six might, under favorable circumstances, be expected to complete the elementary-school course at fourteen, graduate from high school at eighteen, receive his baccalaureate degree at twenty-two, and finish his professional training at twenty-five, twenty-six, or twenty-seven, depending upon the length of the course. As a matter of fact, however, the average American student does not appear to have been able to advance at this rate, as shown by the fact that the average entrance age to Harvard recently reached 19.4 years.¹

¹ Baker, J. H., *American University Progress*, p. 185.

In contrast with this, the normal European child who is destined to complete a higher and professional education will finish the elementary course at about twelve, the secondary at eighteen, and the higher and professional at twenty-two or twenty-four, depending upon the profession he is to enter and the country in which he happens to live. In any event, he completes his educational program — a program supposedly the equal of that supplied by American institutions — about two years earlier, on an average, than the American student who follows a standard program.

The English educational program. The English boy, as indicated earlier, completes his secondary education at about eighteen. After passing the qualifying examination of one of the universities, he enters upon a three- or four-year course. This course is much more specialized than the American college course, but more general than the usual professional course. It is, therefore, pre-professional rather than strictly professional. This being the case, it must be supplemented by a certain amount of specialized training. Thus the prospective physician who has spent three or four years in a general medical course must spend approximately two years in one of the hospitals before he can be licensed for practice. Similarly the prospective lawyer must, upon the completion of a course in jurisprudence, spend some time in a law office as an apprentice. The theologian usually receives his final training in one of the specialized theological colleges. Those who wish to specialize in the arts or sciences may pursue graduate courses at their respective universities. In any event, however — and this in spite of the fact that the English universities are not as highly specialized as those of the continent —

the English boy is able to complete his educational program earlier than the American.

The French educational program. The French boy receives his baccalaureate degree at the age of about eighteen. Thereupon, he may enter one of the higher institutions. If he enters one of the universities, he will pursue his work under one of the four faculties — medicine, law, sciences, and letters — or in the higher school of pharmacy. Before he can enroll under the faculty of medicine, however, he must secure the *certificat d'études physiques, chimiques, et naturelles* from the faculty of sciences, which will require one year. Once enrolled under the proper faculty, the student will usually spend from three to five years with a rather highly specialized course. As he progresses he may from time to time, upon meeting certain specific requirements, receive from the state a variety of certificates, diplomas, and degrees, the highest of these being the doctorate. Most of these carry with them certain privileges, the higher ones carrying usually the right to practice a given profession within French territory.¹ In any event, when the French student has completed his university course at an age ranging from twenty-three to twenty-five years he has also received the license to practice his profession.

The German educational program. The German boy, upon passing the *Reifeprüfung* or "leaving-examination" at the close of his secondary course, at the age of about eighteen, may enter the university or one of the higher technical schools. If he enters the university, he will enroll under one of the four faculties — philosophy, medicine, law,

¹ Degrees granted by the universities rather than by the state are intended chiefly for foreign students and carry no such privileges.

and theology — which constitute the German university. Here he will pursue a rather definite course. If he enrolls under the faculty of philosophy, his work will be much like that of the candidate for the doctorate in the graduate schools of our universities. If he enrolls under one of the professional faculties, he will follow a program not unlike that of the student in one of our graduate professional schools. The length of the courses varies with the faculties. The requirements of the law faculty are usually met in about three and a half years, while those of the medical faculty approximate five and a half years. The requirements of the theological and philosophical faculties range in between, those of the latter being the more severe. Upon completing his university course, the German student must pass a special state examination if he wishes to practice his profession in German territory.

Reasons for the comparatively short and economical European educational programs. That the standard educational program of the European professional student is approximately two years shorter than that of the American is obvious from our analysis. The European, upon graduating from the secondary school at the age of about eighteen, pursues a program extending usually over a period of from four to six years. He is, therefore, prepared to enter upon his profession at all the way from twenty-two to twenty-four, and in exceptional cases, at twenty-five years of age. The American, upon completing his secondary course, also at the age of about eighteen, pursues a program extending over a period of from six to eight years, provided of course that he selects a standard professional course based upon the baccalaureate. He may, therefore, be expected to enter upon his profession between the ages of

twenty-four and twenty-six, and in exceptional cases, at the age of twenty-seven.

The reasons for this disparity in the length of the European and American educational programs is not far to seek. The European student completes his general training in the secondary school, and devotes his time thereafter to a program which is essentially specialized. The American student who wishes to complete a standard educational program must, upon graduation from the secondary school, devote some four years to the completion of a college course — a course at least half of which is general and essentially secondary in character — before he can enter upon a strictly professional course. Hence he completes his educational program some two years later than the European.

The fact that the American educational program requires the student to continue his general training some two years beyond the European does not necessarily mean that American educational standards are higher. It means rather that the training which the four-year American high school affords is not equivalent to that afforded by the European secondary school, which is rarely less than six years in length, and that it must, therefore, be supplemented by further training. Indeed, it is quite generally contended that the graduates of the better European secondary schools have received a type of training which is essentially equivalent to that represented by the completion of the junior division of the American college of letters and sciences. In actual practice this contention seems to be generally borne out, at least to the extent that the graduates of our four-year high schools are not able to compete in university studies with the graduates of European secondary schools. The Rhodes scholarships have afforded an in-

teresting experiment in this respect. It was originally intended that these scholarships should be open to American high-school graduates, as they are to graduates of English secondary schools. However, experience soon demonstrated the impracticability of this, and the requirements were accordingly advanced two years. Even at that, the American Rhodes scholar does not appear to find it particularly easy to compete with the graduates of the English public schools.

All told, then, the relatively short educational program of the European professional student, as compared with that of the American, appears to result directly from economy of time during the first twelve years of the individual's educational career. In other words, the European student gains two years before he enters upon his university studies. This gain is made possible largely by the fact that Europe has arrived at a relatively sound distinction between elementary and secondary education. As indicated earlier, the period between six and eighteen is divided approximately equally between the elementary and the secondary programs. The former is, therefore, limited essentially to the pre-adolescent and the latter to the adolescent period in the development of the individual. During the pre-adolescent period, the individual masters the minimum essentials of the fundamentals in so far as his maturity permits; with the approach of the adolescent period he enters upon the pursuit of his secondary studies, and as he proceeds with these he carries the fundamentals, more or less indirectly, to a greater state of perfection.

In contrast with this, the American program calls for the completion of the fundamentals before the secondary studies are begun. Accordingly, the individual is compelled

to devote approximately two years of the adolescent period to the so-called fundamentals. As a matter of fact, the content of these fundamentals — as represented by the courses of study for the seventh and eighth grades — calls often for far greater maturity than does the initial content of the so-called secondary subjects which the European individual pursues at this stage. In consequence, the individual wastes much of his time in the attempt to master subjects which he would master anyway, more or less indirectly, along with his secondary studies if he were to begin these at the age of about twelve. The last two years of the American eight-year elementary period are therefore essentially lost, since it seems to be quite out of the question to complete the secondary program, which should normally extend over a period of six years, during a four-year period following upon the supposed completion of the fundamentals.

A sound distinction between elementary and secondary education of primary concern to all individuals. From our discussion thus far it might appear that a proper distinction between elementary and secondary education is of primary concern only to those who are to prepare themselves for the learned professions. While we have stressed this aspect, no such conclusion is warranted. Indeed, since the great mass of individuals, both here and abroad, cannot expect to receive a formal education beyond the age of eighteen, a loss of two years during the period from six to eighteen is a matter of serious concern to all. Europe has generally come to recognize this fact, so clearly that there is an obvious endeavor, in connection with both the upper and the lower branches of the school systems, to limit elementary education to the pre-adolescent period in order

that the adolescent period may be given over to some form of secondary education. For the most part the secondary programs for the children of the masses are as yet in the making. Even the most progressive countries have not gone much beyond the provision of middle schools for the first three or four years of the period, where pupils may choose curricula more or less in keeping with their interest and probable future, and continuation schools for the remainder of the period. But this is a long step in advance of the one-time common American practice of requiring the early adolescent to devote himself, in the face of nature and reason, to the perfection of the so-called fundamentals, or, as an alternative, to leave school as a failure.

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CHAPTER III

THE MOVEMENT FOR THE REORGANIZATION OF THE AMERICAN PUBLIC SCHOOL SYSTEM

The movement for the reorganization of the American public school system began during the latter part of the nineteenth century, after the educational ladder was essentially complete in form. Up to that time, the energies of those interested in public education had been directed largely toward the establishment of the system as such. Division after division — first the elementary, then the secondary, and finally the higher — had been placed under public control and had received public support. The internal development of the system had been more or less a matter of unconscious growth. At least, it had not proceeded in accordance with any well-defined scheme or plan, aside from the deep-set desire on the part of our leaders to establish a complete system of public education equally accessible to all, irrespective of rank or standing.

Once the battle for public support and control had been won and the system as such was essentially complete in form, educational leaders began to turn their attention to a critical examination of the new institution. They investigated the functions of the several divisions — the elementary, the secondary, and the higher — and scrutinized their relationships. As time went on and the defects of the system became increasingly obvious, they proposed, often on the strength of elaborate and painstaking investigations,

plans for reorganization. The actual work of reorganization did not get under way, however, until toward the close of the modern period in 1910, although numerous experiments and departures from established practices were undertaken before this time.

President Eliot and the Harvard movement. President Eliot was one of the earliest and most influential leaders in the movement for reorganization. As early as 1873,¹ he pointed out that the average age of admission to Harvard had passed eighteen years. In 1886² he called attention to the fact that two fifths of the freshmen were now over nineteen at entrance, a fact which the faculty viewed with concern. In order to combat this tendency, President Eliot, the faculty, and the board of overseers took a variety of steps. The first of these was to modify the entrance requirements to the end that they might be more flexible. This was generally accomplished by 1886.³ The second step was taken in 1890 when a letter was sent to the parents and teachers of boys who were planning to enter Harvard, urging them to cooperate "in the effort to reduce the average age of admission" by sending the boys to college as soon as they were prepared.⁴ The third step led to the shortening of the period in which a student might complete the college course. The proposal to this end was advanced as early as 1887,⁵ but it was not until 1902 that the requirements for the bachelor's degree were reformulated so that diligent students were able to complete the course in three or three and a half years.⁶

¹ *Harvard Reports*, 1872-1873, p. 10. ² *Ibid.*, 1885-1886, pp. 7-9.

³ *Ibid.*, 1872-1873, pp. 47-51; 1882-1883, pp. 16-17; 1885-1886, pp. 7-9.

⁴ *Ibid.*, 1889-1890, pp. 8-9.

⁵ *Ibid.*, 1887-1888, pp. 12-13.

⁶ *Ibid.*, 1889-1890, pp. 103-107; 1890-1891, pp. 7-9; 1901-1902, pp. 24-28 and 100-102.

The fourth and final step was to impress upon public-school men the necessity of eliminating waste from elementary and secondary school programs. This step was taken by President Eliot in his notable addresses before the Department of Superintendence. The first of these — “Can School Programs be Shortened and Enriched?”¹ — was delivered in 1888; and the second — “Shortening and Enriching the Grammar-School Course”² — in 1892. In these epoch-making addresses President Eliot pointed out, on the basis of careful comparisons, that the graduate of the French secondary school is at the age of eighteen materially in advance of the pupil who graduates from the American high school at about the same age. On the strength of further analysis and comparison, he showed that the inferiority of the American high-school product was in large measure due to waste in the elementary school in connection with such subjects as arithmetic, the language studies, and geography and to inferior methods of instruction. He stressed the fact that waste in the elementary school is quite as detrimental to those who do not prolong their education as it is for those who continue their education in secondary and higher institutions. He urged the necessity of purging the elementary program of all irrelevant materials and of enriching it with vital content. Finally, he strongly recommended, by way of enriching the elementary program, the earlier introduction of natural science, mathematics, and foreign languages.

Recommendations of the Committee of Ten. In 1892 the National Council appointed a committee of ten on secondary-school studies, with President Eliot as chairman. The committee was authorized to arrange a conference of

¹ *Educational Reforms*, Chap. VII.

² *Op. cit.*, Chap. XI.

school and college teachers in each of the principal subjects entering into the secondary-school program. The reports of these conferences, each of which was to concern itself primarily with "the proper limits of its subject, the best methods of instruction, the most desirable allotment of time for its subject, and the best methods of testing the pupils' attainments therein," were to constitute the basis of the final report of the committee to the council. This final report, including the reports of the nine conferences, was submitted in 1893.

While it was not the primary purpose of the committee and the conferences to consider the reorganization of the school system, it was inevitable that the issue should present itself. In any event, among the eleven problems which the committee submitted to the conferences as a basis of discussion were the following :

In the school course of study extending approximately from the age of six years to eighteen years — a course including the periods of elementary and secondary instruction — at what age should the study which is the subject of the conference be first introduced?

What topics, or parts, of the subject may reasonably be covered during the whole course?

What topics, or parts, of the subject may best be reserved for the last four years? ¹

In formulating their reports, most of the conferences made recommendations relating to the content of their respective subjects in the grades below the ninth. In some cases these recommendations aimed primarily at the enrichment of the elementary course of study. Thus, the conferences on the natural and social sciences argued strongly in favor of teaching suitable materials from these

¹ *Report of the Committee of Ten*, p. 74.

fields from the very beginning of the pupil's school career. In other cases, the recommendations aimed very definitely at the earlier introduction of content and methods which had hitherto been limited to the four-year high school course. Thus, the conference on Latin recommended that "education below the high-school course should be so organized that students may be prepared to enter upon that course at least a year earlier than, in most places, they do now."¹ The conference on modern languages urged the introduction of the study of French or German at the age of about ten.² The conference on English recommended that the English work of the seventh and eighth grades be placed in the hands of special teachers; that expression be stressed rather than formal grammar; and that school readers be superseded by whole classics.³ The conference on the social sciences recommended the teaching of "Greek and Roman history with their Oriental connections" in the eighth grade.⁴ Similarly, the conference on mathematics recommended that elementary pupils be familiarized with simple algebraic terminology along with their work in arithmetic; that the study of formal algebra should begin with the fourteenth year; and that "systematic instruction in concrete or experimental geometry should begin at the age of about ten, and should thereafter occupy about one school hour per week for at least three years."⁵

In drawing up its final report to the council, the committee expressed itself in part as follows:

In preparing these programs, the committee were perfectly aware that it is impossible to make a satisfactory secondary-school program limited to a period of four years and founded on the

¹ *Report of the Committee of Ten*, p. 74.

² *Ibid.*, pp. 88-89.

³ *Ibid.*, p. 163.

⁴ *Ibid.*, p. 96.

⁵ *Ibid.*, pp. 110-111.

present elementary-school subjects and methods. In the opinion of the committee, several subjects now reserved for high schools — such as algebra, geometry, natural science, and foreign languages — should be begun earlier than now, and therefore within the schools classified as elementary; or, as an alternative, the secondary-school period should be made to begin two years earlier than at present, leaving six years instead of eight for the elementary-school period. Under the present organization, elementary subjects and elementary methods are, in the judgment of the committee, kept in use too long.¹

Recommendations of the Committee on College Entrance Requirements. Two years after the Committee of Ten had submitted its report, the Department of Secondary Education appointed a committee on college entrance requirements consisting of representatives of both the Department of Secondary Education and the Department of Higher Education. In the course of its deliberation, the committee called upon a number of coöperative committees representing national departmental associations. The final report of the committee was submitted in 1899, after four years of painstaking investigation and deliberation.²

The committee took a very firm stand in favor of a six-year secondary school, beginning with the seventh grade, as is evident in the following extracts from the resolution bearing on this problem :

The most necessary and the most far-reaching reforms in secondary education must begin in the seventh and eighth grades of our schools. Educators agree that these grades must be enriched by eliminating non-essentials and adding new subjects formerly taught only in the high school. These reforms require the highest pedagogic knowledge and the most efficient supervision. In our opinion these problems can be solved most quickly and surely by making the seventh and

¹ *Report of the Committee of Ten*, p. 45.

² *N. E. A. Addresses and Proceedings*, 1899, pp. 625-817.

eighth grades parts of the high school under the immediate direction of the high-school principal.

The seventh grade, rather than the ninth, is the natural turning point in the pupil's life, as the age of adolescence demands new methods and wiser direction. Six elementary grades and six high-school, or secondary, grades form symmetrical units. The transition from the elementary to the secondary period may be made more natural and easy by changing gradually from the one-teacher regimen to the system of special teachers, thus avoiding the violent shock now commonly felt upon entering the high school.

The inspiration afforded by a well equipped high-school principal and by a special teacher in language, science, or mathematics would do much to retain desirable students in the high school, thus raising the educational standard of American citizenship. . . . As far as statistics are accessible on this point, the experiment of placing these grades in the high-school building has been successful, resulting in better scholarship and a greater percentage in the number of students entering the ninth grade.¹

Superintendent Greenwood's address before the Department of Superintendence. Up to this time one of the chief obstacles in the way of a thoroughgoing reorganization of the school system — a reorganization terminating in a six-year elementary and a six-year secondary school — had been the general feeling on the part of many leaders in elementary education that a standard elementary course could not be completed in less than eight years and that any shortening of the elementary course would necessarily lead to an earlier elimination of many pupils who were not looking beyond an elementary education. Under these circumstances the Kansas City school system, which had been organized on a seven-four basis since 1867, attracted much attention. Accordingly, the Department of Superintendence invited Superintendent Greenwood, who had

¹ *Op. cit.*, pp. 659-660.

been at the head of the Kansas City schools for twenty-nine years, to deliver an address at the Cincinnati meeting in 1903.

In this address ¹ Superintendent Greenwood maintained that Kansas City pupils of ordinary intellectual ability were completing in a satisfactory manner in seven years as heavy a course of study as was being offered by the best schools throughout the country. Approximately 85 per cent of the pupils who graduated from the elementary schools in Kansas City, he pointed out, completed the course in seven years or less. What is more, a comparison of the ages at which pupils entered high school showed that Kansas City pupils were materially in advance of others. Thus, of the pupils admitted to the Kansas City high schools in September, 1902, 56.4 per cent were fourteen years of age or less, and 84.7 per cent were fifteen years of age or less; the corresponding percentages for St. Louis in 1900 were 35.6 and 67.5. Finally, Superintendent Greenwood presented figures which showed that Kansas City had a greater percentage of pupils in its high schools "than any other city of the same or larger size" in the country. This fact he attributed, upon careful analysis, to the seven-year elementary school.

These facts, presented in a most able manner, made a deep impression upon the school men of the country.

President Harper and the Chicago movement. Largely through the initiative of President Harper, the University of Chicago conferences of affiliated and coöperating schools early took up the problem of reorganizing the school system. At the fifteenth annual conference (in 1901) Professor John Dewey pointed out, among other things, that such

¹ *N. E. A. Addresses and Proceedings*, 1903, pp. 247-263.

a reorganization would make for a more efficient division of labor between the elementary, secondary, and higher schools. In speaking of the elementary period, he said :

The length of time allotted represents a misconception of the aim of this period, and so tends to a misdirection of energy. The aim, as ordinarily considered, is to cover a certain amount of ground in studies and thus acquire a certain amount of knowledge. Since this represents all the information the mass of the future citizens will get in any scholastic way, there has been a constant tendency to increase the term of time so as to cover more ground.

When I say that the acquiring of knowledge is not the proper end of elementary education, and to make that the aim is to encroach upon secondary instruction, I do not mean that children at present are getting too much knowledge. Of course, they get too little, and less, in my judgment, than they would get if the focus of effort was somewhere else. I mean the aim is placed wrong. The proper aim of elementary tuition, I should say, is to organize the instincts and impulses of children into working interests and tools. The stress should be upon method, not upon result; not that we do not want results, but that we can get better results when we transfer the emphasis of attention to the problem of mental attitude and operation. We need to develop a certain active interest in truth and its allies, a certain disposition of inquiry together with command of the tools that make it effective, and to organize certain modes of activity in observation, construction, expression, and reflection.

Six years ought to be enough to accomplish this task. And the limiting of the period to that time would, in my judgment, tend in the long run to make clear what is the real issue of elementary education. Such an outcome in the minds of the general public and of teachers would free energy from devotion to false aims and irrelevant tasks. The elementary school would be relieved of its two time-wasting factors: on one side, daily repetition of drill in rudiments which have been previously mastered; and, upon the other, anticipations of advanced subject-matter so difficult that it can be pursued intelligently only at a later period.¹

¹ *School Review*, Vol. XI, pp. 18-19.

In speaking of the secondary period, he said :

The high school at present has no definite task of its own, and no specific aim. It begins at no definite point and ends at none. It stops, as President Harper has just told us, in the middle of a situation. It carries nothing to completion, but spends its energy in preparation for a work finished elsewhere. It makes beginnings, of the issue of which it has no vision, and over the consequences of which it has no supervision. Hence, the waste that results from confusion and continual distraction of energy. A six-year period would enable the high school to face its own peculiar problem : that of opening to the mind avenues of approach to all the typical phases of nature and society, and acquiring a sympathetic knowledge of these areas of life — culture, in a word. Facing its own problem without distortion from the outside pressure, it would have free space and leisure in which to work out that knowledge of the universe of nature and of humanity that is worth while ; and that would enable its graduates to undertake later specialization in professional and research lines in an intelligent way — intelligent both as to consciousness of their peculiar capacities, tastes, and needs, and as to the knowledge of the relations of the particular province to which they are to devote themselves to the whole federated field of life.¹

The sixteenth annual conference, meeting in 1902, gave much of its time to a discussion of a reorganization of the school system which would result in “ an elementary school of six grades followed by a secondary school of six grades.” It was generally conceded that such a change would have to be introduced very gradually. Accordingly, President Harper submitted the following as a point of departure :

1. To connect the work of the eighth grade of the elementary school with that of the secondary school.
2. To extend the work of the secondary school to include the first two years of college work.

¹ *Op. cit.*, pp. 19-20.

3. To reduce the work of the seven years thus grouped together to six years.
4. To make it possible for the best class of students to do the work in five years.¹

After pointing out the advantages and disadvantages of such a plan, he recommended that three committees of seven each be appointed to consider the problem before the conference — one from the point of view of the elementary school, the second from the point of view of the secondary school, and the third from the point of view of the college; and that these committees constitute a joint committee of twenty-one and submit a report at the next conference.

The committees reported at the seventh annual conference in 1903. Each favored the adoption of the plan proposed by President Harper. The committee on elementary education held that the seven-year plan would have a wholesome effect on the elementary school. The condensation which would necessarily follow the adoption of the plan, it felt, would lead to a critical examination of the course of study and the elimination of much that is useless and unsuitable. Beyond this, the committee maintained — partly on the strength of the record made by Kansas City — that the shortened and simplified course would induce many to complete the elementary course who would leave school early on the old plan.

The committee on secondary schools, after outlining a six-year course along the line suggested by President Harper, expressed itself as follows :

The work set forth enables the student completing the six years' work to enter any professional school, such as law, medicine, dentistry, engineering, theology, etc., and also to enter upon pure university

¹ *Op. cit.*, p. 1.

work at once and without delay, while he completes something he began in the lower school. There are in reality only three stages in a complete education: One ought to end about the twelfth year; two ought to end about the eighteenth year; and three ought to end about the twenty-fourth year. Each of these is in a sense complete in itself, but our present scheme includes part of two in one, and so does violence to the unity of the scheme. . . .

In all our educational meetings — county, state, and national — we have talked long and learnedly of the boy and girl during the period of adolescence, but no one has felt satisfied that much of practical utility has been accomplished. The pupil is graduated from his eighth-grade work in the midst of this period, when he is possessed of the greatest number of hallucinations, vagaries, etc. He thinks he knows something, has completed something, and during the long vacation following often decides that his education is sufficient and that he need not go further. Now, if he is transferred from the elementary school one or two years sooner, he has time to learn his new surroundings. By the time he reaches this period he has no chance to consider his education ended; he is more easily managed, and is more likely to remain till he has completed the second stage of his educational career. So we say that the scheme herein provided will do more than has yet been done to tide the pupil over the period of adolescence. He avoids the chasm — the impassable gulf so often mentioned as separating the grammar school from the high school, when both ought to be harmonious parts of one unit and not two separate units.

The period of the pupil's life covered by this six-year course is the most important in his whole life, because during these years he decides what his career in life shall be; and so he needs the close magisterial and parental supervision which this proposition provides in keeping the young men and the young women at home two years longer. The stimulus afforded by this scheme to the second and third stages of education is almost incalculable.¹

The committee on colleges, after stating that certain college authorities, with whom it had been in correspond-

¹ *School Review*, Vol. XII, pp. 20-21.

ence, were opposed to the plan on the ground that the secondary school would thereby encroach upon the domain of the college and would attempt to do a type of work for which it was not equipped, pointed out that the first two years of the college course are essentially secondary in character and had actually been generally embodied in secondary courses in Europe. It felt that the upward extension of the high school to embrace these two years would be highly desirable, quite aside from theoretical considerations, since it would make them accessible to many who are now compelled to leave school upon the completion of the regular high-school course, and since many, after completing the work of these two years, would find ways and means enabling them to continue their training in higher and professional institutions.

The Commission of Twenty-one, composed of the above committees, reported at the eighteenth annual conference in 1904. It held that the issues which had been raised were so fundamental in character that they should be subjected to further investigation, and recommended that a Commission of Fifteen be appointed for this purpose.¹

Recommendations of the Committee on Six-Year Courses. In 1905 the Department of Secondary Education of the National Education Association voted to appoint a standing committee on six-year courses. The committee, under the chairmanship of G. B. Morrison, issued a report in 1907.² It pointed out that there was strong sentiment in favor of an equal division of time between elementary and secondary schools. The chief objections, it held, were economic, since the seventh and eighth grades would be more costly

¹ *School Review*, Vol. XIII, pp. 23-24.

² *N. E. A. Addresses and Proceedings*, 1907, pp. 705-710.

on the new basis. It felt, however, that these objections would largely disappear as people came to understand the advantages of the plan. The reasons favoring an equal division, elaborated at some length by the committee, may be summarized as follows :

1. The plan would give the seventh- and eighth-grade pupils "the advantage of being taught by teachers specially trained for the different branches."

2. The departmental plan would give the seventh- and eighth-grade pupils "the advantage of daily contact with several personalities instead of that all-day association with one teacher which often breeds an artificial psychic atmosphere that savors of the abnormal."

3. It would give pupils the "advantage of laboratories in which elementary science could be advantageously begun much earlier than it is at present."

4. It would make manual training shops readily accessible to these pupils.

5. Modern languages could be "begun earlier and continued longer than at present, thereby making it possible to learn the language naturally by means of conversation."

6. It would make the transition from the elementary to the secondary school less abrupt.

7. It would cause more pupils to enter the ninth grade, since it would remove what is often regarded as a natural stopping place.

8. It "would make the system more nearly self-consistent," since six years would be allotted to the elementary and six to the secondary period as in the leading European countries.

9. The downward extension of the secondary course would give pupils more time to prepare for college.

10. The lengthened secondary course would facilitate the "outward extension of the course of study," making possible the inclusion of more of the newer branches.

The second committee, under the chairmanship of E. W. Lyttle, reported in 1908.¹ The report represented two features which were of marked practical significance. The first of these was an outline statement of the minimum requirements that might be expected of pupils in the several elementary-school subjects by the close of the sixth school year; and the second was a suggested list of studies for the seventh and eighth grades.

The third committee, under the chairmanship of G. B. Morrison, submitted its report in 1909.² After endorsing the "points and suggestions of preceding committees," the committee expressed itself as follows:

The sentiment for the six-and-six division is growing. By an extensive correspondence through private and circular letters we note that there is a freedom of discussion and hospitality in the entertainment of the idea of a new division of the twelve years in the public schools, not noticed in former correspondence. Almost every one who has given any expression seems to believe in some departure from the eight-and-four-year division, and several cities report these departures. In some cities six-year courses in the high school have been in vogue for several years.³

After citing a number of its correspondents, the committee concludes:

There is a general impression revealed by this and other correspondence that the whole course of instruction, both elementary and secondary, should be simplified; that the differentiation of pupils' work should begin at the end of the sixth grade; that time is wasted

¹ *N. E. A. Addresses and Proceedings*, 1909, pp. 625-626.

² *Ibid.*, pp. 496-503.

³ *Op. cit.*, p. 499.

on non-essentials and on impractical topics; that there should be greater flexibility in the promotion of pupils; that the whole system should be reorganized. . . .

The committee is of the opinion that while we may not expect or hope for any sudden or extensive changes in the general scheme of organization from the eight-and-four-year division to the six-and-six division, nevertheless we feel certain not only that the change is inevitable but that it is already in progress and is taking place in different ways to meet local conditions. We further believe that the reorganization of the public school system along the lines of this discussion is of fundamental importance, and that every reasonable measure that can be taken to overcome the inertia of the established system and to make for an organization more in consonance with advanced educational opinions and with the needs of modern society should be employed.¹

Recommendations of the Committee on Economy of Time. In 1905, at the suggestion of President James H. Baker, the National Council appointed a committee to make a preliminary inquiry into "the contemporary judgment as to the culture element in education and the time that should be devoted to the combined school and college course." This committee did not go beyond suggesting two or three topics for investigation. In 1907 the subject was revived and President Baker was asked to make a preliminary statement upon it.

In carrying out this commission, President Baker sent a rather detailed inquiry to a group of selected men — presidents of universities, professors of education, superintendents of schools, sociologists, and business men.² Among the questions raised by the inquiry were the following:

1. At what age should formal general and special education end, as normally marked out for attaining a professional degree or the

¹ *Op. cit.*, p. 502.

² *N. E. A. Addresses and Proceedings*, 1908, pp. 466-478.

Ph. D. degree? If the entire period of general and special education should be shortened, where should time be saved?

2. Is there important waste of time in elementary education? Should the period of elementary education be shortened? Where and how?

3. Should the high-school period be shortened or should it be extended in either direction? Should it be six years — from twelve to eighteen, or fourteen to twenty?

4. What should be the length of the college course?

In discussing the replies to these questions, President Baker expressed himself as follows :

The first impression is that there is real and widespread dissatisfaction with the results of education, especially as related to the time expended; that there is a growing consciousness of the need of adjustment to new ideals; that there is a demand for reinvestigation and reorganization. The people are ready for the leadership of any representative body that will attempt to reduce to some degree of order educational theories, methods, and standards. It is a surprise to me to learn that two thirds of the correspondents believe the period of formal education should be shortened and that very many would place the age limit at twenty-four or earlier. All ask for a shorter limit, or better results for the time, or both. They recognize that since the early New England college, education has added eight years, the high school has taken the place of the college, four years have been set apart for the higher degrees; that the college today occupies an anomalous position without a well-defined function; that each unit of the system is yearly increasing its demands; that quantity is the ideal rather than quality.

There is nearly unanimity of opinion that much time is wasted in elementary education, and a large majority claim that the time should be shortened. . . . A majority favor a change of the high-school period, the preference being for twelve to eighteen. . . . The length of the college course is put by the most at four years, but this is done by those who believe college entrance should be much earlier, and by those who would begin university work with the junior year, as well as those who would preserve the college intact. . . . And here is

the most significant fact of the whole report: One half of the correspondents would have university work begin at the junior year — work that gives scientific power — with groups leading to the various professional degrees or the Ph. D. degree, the last two years counting toward those degrees; and would complete the professional work or Ph. D. work in two years more, or six years after college entrance.¹

In conclusion, President Baker recommended that the council appoint a committee to investigate the issues raised, from the standpoint of elementary, secondary, and higher institutions, and from the point of view of sociology and educational philosophy, and to submit a final report with practical recommendations. This committee, under the chairmanship of President Baker, made a brief report in 1909, stating, among other things, that it had undertaken to prove or disprove the thesis, "That in the entire period of general education two years can be saved, without loss of anything essential in culture, efficiency, or character-making."² In 1911 President Baker made a further report stating that the committee had provisionally agreed that the elementary period should extend from six to twelve years of age; the secondary, from twelve to eighteen; the collegiate, from eighteen to twenty or from sixteen to twenty; and the graduate and professional, from twenty to twenty-four.³

In 1912 the committee made another brief report.⁴ President Baker stressed the fact that the committee did "not advocate lowering the standards of American education, or cramming and hurry," but that its aim was rather to secure "better results" through a more economical use of

¹ *Op. cit.*, pp. 467-469.

² *N. E. A. Addresses and Proceedings*, 1909, pp. 375-380.

³ *Ibid.*, 1911, pp. 94-103. ⁴ *Ibid.*, 1912, pp. 507-510.

material and methods, and thereby to effect a saving in time. Nor was it proposed, he pointed out, to shorten the period for those who leave school early to enter vocations, the intention being "rather to lengthen it by giving them the tools of education at the age of twelve and then offering pre-vocational courses that will tend to keep them in school longer." President Baker also stated that there were "now three committees at work on this problem: the council committee and two coöperating committees, that of the National Association of State Universities and that of the National Department of Superintendence." The latter, the Committee on Economy of Time in Elementary Education, had been appointed in 1911 at the suggestion of President Suzzallo "to investigate the waste in elementary schools and to make definite proposals for eliminating the archaic and least useful matter of the course of study and to propose more economic methods of teaching." The committee submitted a preliminary report at this time.¹

The Council Committee on Economy of Time issued its final formal report in 1913.² It expressed itself strongly in favor of reorganizing the school system in accordance with the provisional scheme advanced in 1911. Its recommendations regarding the reorganization of elementary education are summarized in the following paragraphs.

The committee agree that there is much waste in elementary education, and that the elementary period should be from six to twelve. Nearly all of our correspondents are emphatic regarding waste and the importance of shortening the entire period of general education. Saving of time can be made in the following ways:

¹ *N. E. A. Addresses and Proceedings*, 1912, pp. 510-526.

² U. S. Bureau of Education, *Bulletin No. 38*, 1913.

1. The principle of selection is, first: Choose the most important subjects and the most important topics; make a distinction between first-rate facts and principles and tenth-rate; prime thoroughly, stick to the elements of a subject; do not try to teach everything that is good; confine the period of elementary education to mastering the tools of education. This does not prevent inspirational work, which is a demand on the skill of the teacher rather than on time. A great secret of education is to accomplish a maximum of training with a minimum of material. This is especially true of formal subjects; it is true also of inspirational subjects in that, after a general survey of the field, emphasis should be placed upon a few selected points. Under the conditions above enumerated, the formal elementary period can end in six years.

2. Content-subjects should not be taught with the methods suitable to the formal subjects; for instance, in the elementary period literature, history, science, should be inspirational; this does not mean presentation to pupils of amusing stuff. No doctrine has been more harmful than that one subject of study is as good as another, and that all subjects should be taught alike; arithmetic is a tool and a discipline in absolute accuracy; literature, history, and elementary science in this period are for culture.

3. Include the last two years of the elementary school in the period of secondary education and begin the study of foreign language, elementary algebra, constructive geometry, elementary science, and history two years earlier.¹

In summarizing its conclusions regarding secondary education, the committee said:

It will be seen by reference to the original "questions" that the majority of the correspondents favor a change in the high-school period and that the preferences are for twelve to eighteen. The committee favor the change noted in the previous statement, for the reason that it will adjust itself to present tendencies more conveniently than any other, and because it represents, we believe, essential principles in the organization of education. . . .

¹ *Op. cit.*, p. 15.

As to economy of instruction, the following principles may be stated:

1. In general the principles recommended for elementary education apply equally to secondary education.

2. Simplify the courses of instruction; cease multiplying subjects; concentrate on a few valuable studies — it is not necessary to take all the sciences in a high school; make college entrance requirements reasonable. The great mistake of our education is to suppose that quantity and strain constitute education. Education is a question of doing a few essential things well and without overstrain. The college has committed a grievous mistake in demanding ever more in quantity rather than in quality produced under conditions of healthy normal development.

3. It is of prime importance that, so far as possible, subjects be vitalized and related to modern life and be adapted to the pupil's interests, capacity, and mental development.

4. The principle of selection obtains here — choice of subjects and of facts and principles under each subject; also differentiation of method — training from formal subjects, and knowledge and inspiration from certain content subjects.

5. By far the greatest emphasis is given by our correspondents to moral training and preparation for citizenship.

6. Under the conditions recommended for elementary and secondary education, the committee believe that as much can be accomplished at the age of eighteen as at twenty under present conditions, and that the period now represented by the school and college can be shortened at least two years. It is to be understood there should be less — rather than more — cramming, strain, and mechanical measure of value.¹

Of special significance in this connection was President Suzzallo's recommendation that the six-year secondary school ought to be subdivided into two administrative units — a junior high school and a senior high school. He said:

¹ *Op. cit.*, pp. 16-17.

A six-year unit in the elementary school is not objectionable. The extreme immaturity of the pupils requires a long period for substantial achievement. The amount of basic knowledge and power to be acquired by them forbids selection of pupils and specialization of their activities at any time within the first six years. But these arguments do not hold in the case of the high school. The students are more mature; they are free from the restrictions of compulsory education; they are already discovering the personal interests and limitations which point toward specific types of training and life work. They feel the pressure that comes from the financial limitations of their families. No matter how varied the offering of studies is, or how adjustable the privileges of election, the six-year course is not an attractive or practical scheme for all those who might be able to pursue their general course beyond the primary school. It ought to be subdivided into two administrative sections: (1) A junior high school of three years, extending from the twelfth to the fifteenth year; and (2) a senior high school, also of three years, covering the period from the fifteenth to the eighteenth year.

Such a subdivision and point of articulation is necessary upon social as well as individual grounds. A three-year junior high school will assure a larger number of citizens possessing some cultural training of a secondary grade than a six-year high school. A point of articulation in the middle of such a high-school system would afford an appropriate position for the establishment of vocational schools of a type now largely missing in the proposals for vocational schools. . . .

The period of general education beyond the elementary school must provide frequent points of articulation, so that the inevitable selective function of the liberal schools may be supplemented by a series of vocational schools into which those who cannot go on may be distributed. Under the scheme thus far discussed, points of articulation between the general scheme of education and a special series of vocational schools would be provided at the twelfth, eighteenth, and twentieth years. The gap between the twelfth and the eighteenth year is too large to suit human nature, economic ability, or social needs, and should be broken in the middle — say, at the fifteenth year. This is in line with tendencies already established, as no other suggested point of articulation within the six-year high school is.¹

¹ *Op. cit.*, pp. 26-27.

Regarding higher education the committee expressed itself as follows :

The committee believe that shortening the whole period of general education is inevitable and necessary ; that college work must end at about twenty, and university work must begin at that age. Since this result appears to be in the near future, is it not time for universities to take hold of the problem and aid in the reorganization of the scheme of education? A somewhat remarkable judgment appears in the summary of the opinions of our correspondents upon the subject of the college and university. Approximately one half favor ending the college work with the sophomore year and beginning university work with the junior year — this work to count toward higher and professional degrees — and building the schools of medicine, law, and engineering on the present first two years of college. In other words, the university age is to be twenty instead of twenty-two.¹

After the Council Committee on Economy of Time had issued the above report, the center of activity shifted to the Coöperating Committee on Economy of Time in Elementary Education. This, as was indicated earlier, was appointed in 1911 by the Department of Superintendence. It agreed with the Council Committee that "there is great waste in elementary education" and took the position that "either the period should be shortened, or that more should be accomplished in the time allotted, or both." The committee set itself to work, therefore, to determine as far as possible "the proper content for the subjects of study in the elementary curriculum." After several "preliminary reports defining in outline form the scope of the problem and the possible lines of attack in its solution," the committee issued a series of detailed reports on Minimum Essentials in Elementary-School Subjects.² These reports,

¹ *Op. cit.*, p. 17.

² Part I of the *Fourteenth*, *Sixteenth*, and *Seventeenth Yearbooks of the National Society for the Study of Education*.

based for the most part upon the results of rather rigidly controlled scientific investigations, have contributed much to the reorganization of elementary and secondary education on the six-three-three basis. We shall have occasion to discuss them with more detail in a later chapter.

Early departures in practice. Although the first two decades of the movement for the reorganization of the public school system were given over largely to discussion and investigation, departures from established practices were by no means uncommon. For the most part, however, these departures did not represent comprehensive schemes involving the reorganization of elementary and secondary education on the six-six or six-three-three basis until well toward the close of the second decade of the movement in 1910. The following figures concerning the organization of elementary and secondary schools in 669 cities having a population of eight thousand or over, compiled for the school year 1910-1911 by the Commissioner of Education, attest this fact:

NUMBER OF CITIES	BASIS OF ORGANIZATION
489	8-4
48	7-4
86	9-4
7	8-3
4	8-5
3	7-5
8	6-4
24	Significant departures

While early departures in practice were thus as a rule not sufficiently comprehensive to involve a thoroughgoing reorganization of elementary and secondary education, they were, nevertheless, not infrequently very significant, partly because they prepared the public mind for more

fundamental changes, and partly because they often represented steps in the direction of a genuine reorganization. The more important of these departures may be summarized under the following heads:

Elimination of extremes in the length of the elementary and secondary divisions. As the discussion regarding the reorganization of the school system progressed and the functions of the several divisions came to be more definitely understood, the nine-year elementary school (commonly found in New England) and the three-year high school (more or less prevalent in the South) came to be viewed more and more critically, since they represented the extremes in maladjustment. In consequence, departures aiming at the elimination of these extremes became quite common. The three-year high school especially came to be generally lengthened to four years; so generally indeed, that in 1911 only 7 of the 669 cities, referred to above, reported three-year institutions. The elimination of the nine-year elementary school came more slowly, 86 of the 669 cities in question still reporting such institutions in 1911. Departures from the nine-year plan were, however, by no means uncommon during the decade beginning in 1900, though they occurred more commonly after 1910. In most cases these departures involved the substitution of an eight-year elementary school, the extra grade being as a rule either eliminated or transferred to the high school, thereby converting the latter into a five-year institution with greater possibilities for college preparation.

Provision for exceptionally gifted children. In a number of progressive cities — notably Baltimore, Indianapolis, Lincoln, Rochester, and Worcester ¹ — the school authorities

¹ U. S. Bureau of Education, *Bulletin No. 14*, 1911, pp. 42, 54, 55, and 65.

responded to the plea for economy of time by making special provisions for the progress of exceptionally bright children after they had completed the sixth grade. While these provisions varied more or less from place to place, they had certain basic features in common. As a rule the exceptionally gifted seventh- and eighth-grade children were brought together in special rooms, or at convenient centers. Here they were allowed to pursue curricula made up of elementary- and high-school subjects. In this way it was often possible for them to complete the work of the seventh and eighth grades and of the first year of high school in two years and to effect additional economy thereafter. At the very least, the plan enabled them to meet the requirements of grades seven to twelve inclusive in five instead of the usual six years.

Provision for flexible promotion schemes. In many cities the school authorities endeavored to effect economy of time through the adoption of flexible promotion schemes. As a rule these schemes enabled pupils of varying abilities to progress more or less at their own rate. They were thus a boon for both the exceptionally gifted and the unusually slow. In most cases, once the movement became more or less general, the school authorities adopted schemes or plans which had been developed and tried out in other cities.

In 1910 the Brooklyn Teachers Association conducted, through its committee on school organization, an extensive questionnaire investigation, partly in order to determine the extent and the popularity of such plans. Out of 973 educators who were approached on this matter, 138 had tried the Batavia plan (a plan providing special aid for the slow) and 62 per cent of these favored it after the trial; 169 had tried the North Denver plan (a plan en-

abling bright children to do more extended, more intensive, and more individual work than the other members of the class) and 94 per cent of these favored it after the trial; 75 had tried the Cambridge plan (a plan allowing children of varying abilities to progress through the grades at different rates of speed) and 92 per cent favored it after the trial; 111 had tried the large-school plan (a plan in accordance with which the children of a given grade are grouped into classes on the basis of ability and allowed to progress accordingly) and 93 per cent favored it after the trial; and 207 had tried the Pueblo plan (a plan enabling each pupil to advance as rapidly as he can accomplish his work) and 96 per cent favored it after the trial.

Departmentalization in the seventh and eighth grades. In his discussions relating to the reorganization of elementary and secondary education, President Eliot had strongly advocated departmental teaching in the upper grades of the elementary school. It was not until 1900, however, that the matter received serious consideration. At that time Superintendent Maxwell began to introduce the plan in New York City. Thereafter, departmentalization — although encountering much opposition in many quarters — spread rapidly to other cities.¹ In 1912-1913 four hundred and sixty-one cities with a population of five thousand or over reported departmental teaching to the Commissioner of Education.²

Departmentalization had important bearings, quite aside from the fact that it improved the quality of instruc-

¹ Bunker, F. F., *Reorganization of the Public School System*, Chap. V; N. E. A. *Addresses and Proceedings*, 1909, pp. 498-503; and Kilpatrick, V. E., *Departmental Teaching in Elementary Schools*, pp. 1-10.

² *Report of the Commissioner of Education*, 1913, Vol. I, p. 139.

tion. It did much to prepare the public mind for the junior high school, involving as it did, within certain limits, the segregation of the early adolescent, instruction under specialized teachers, and, in some cases at least, the introduction of one or two high-school subjects.

*Six-six and six-two-four plans.*¹ In a number of cities the school authorities early endeavored to effect economy of time through the adoption, in whole or in part, of the six-six or six-two-four plans. The adoption of either of these plans meant essentially the acceptance of the principle that the period from six to eighteen should be equally divided between elementary and secondary education. Those who took this step were influenced not only by the arguments of leading educators but also by the practical example afforded by Boston, which had maintained its Latin school on a six-year basis almost uninterruptedly since its foundation in 1635.

In 1894 the city of Chicago began to establish class centers which received pupils, upon the completion of the sixth grade, for the beginning of a six-year college preparatory course. Several years later, however, the plan was abolished — probably largely because it ministered to the needs of a class rather than to the needs of the people as a whole.² Providence, Rhode Island, made somewhat similar provisions in 1898 in connection with each of its four high schools. After a trial of one year, however, the plan was abolished in all but one of the schools. Saginaw, Michigan, adopted an even more comprehensive scheme in 1898.

¹ Consult especially Bunker, F. F., *Reorganization of the Public School System*, Chap. V; and N. E. A. *Addresses and Proceedings*, 1909, pp. 498-503.

² For a definite account, consult *School Review*, Vol. VI, pp. 379-393.

The entire school system was reorganized on the six-six basis. Upon the completion of the sixth grade, pupils chose either a language or a general course. But here, too, the plan was abandoned shortly after, upon the resignation of Superintendent Whitney.¹ Ithaca, N. Y., gradually adopted a thoroughgoing six-six plan in the course of the first decade of the present century. Richmond, Indiana, adopted the six-two-four plan in 1896 and developed thereafter a series of curricula essentially in conformity with the principles of the six-six plan. Other cities followed, to the extent at least that there were in 1910-1911, according to the figures cited above from the report of the Commissioner of Education, twenty-four cities with a population of eight thousand or over which had made significant departures from the eight-four plan. Very few of these, as will appear presently, had as yet established junior high schools.

The establishment of junior high schools. As indicated earlier, the establishment of junior high schools as such did not begin until toward the close of the first decade of the twentieth century. Berkeley and Columbus, which established such institutions during the school year 1909-1910, and Los Angeles, which organized such a school in 1911, are generally cited as the pioneers in the movement. Other cities followed in rapid succession. In most cases, however, it is rather hazardous to assign definite dates, at least until a thoroughgoing investigation has been made, since the new institutions were often introduced gradually and it is difficult to tell when they began to meet the basic requirements of a junior high school.

According to the report of the Commissioner of Education, 31 out of 200 superintendents to whom an inquiry was

¹ Bunker, F. F., *Reorganization of the Public School System*, p. 82.

sent during the year 1911-1912 reported that they had adopted the six-six plan in some form or other.¹ Eleven of these had a junior division composed of grades 7, 8, and 9 or of 7 and 8, which was either under the supervision of a separate principal, or housed separately, or both. Since there is no information regarding the curricula of these junior divisions, it is very probable that some of them were little more than departmental schools.

During the school year 1913-1914 one hundred and sixty-seven cities with a population of 2,500 or over reported junior high schools to the Commissioner of Education in accordance with the following definition :

A junior high school is defined as an organization of grades 7 and 8 or 7 to 9, whether housed with the senior high school or independently, to provide by various means for individual differences, especially by an earlier introduction of pre-vocational work or of subjects usually taught in the high school.²

A reasonably rigid application of this definition as a standard led, however, to the rejection, as junior high schools, of all but 57 of these institutions. Adequate data were lacking for 26 other cities previously reported as having junior high schools.

Once it had gained an initial foothold, the junior high school spread rapidly. In 1920 three hundred and eighty-six cities with a population of 2,500 or over reported 575 junior high schools to the Bureau of Education; and two years later 456 cities of this class reported a total of 733 junior high schools. These figures, it should be borne in mind, are in all probability by no means complete, since many cities failed to make reports.³

¹ *Report of the Commissioner of Education*, 1912, Vol. I, p. 155.

² *Ibid.*, Vol. I, pp. 147-151.

³ Bureau of Education, *City School Leaflet No. 12*, September, 1923.

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CHAPTER IV

JUNIOR HIGH SCHOOL PUPILS

Since the junior high school represents above all a very definite attempt on the part of educators to provide a suitable educational environment for children approximately twelve to sixteen years of age, we must examine the outstanding characteristics of this group of children with some care before we continue our discussion of the new institution. For reasons which will become more obvious as we proceed, we must examine these children especially with reference to their age-grade status, their mental ability, their physiological maturity, and their peculiar characteristics and needs.

AGE-GRADE STATUS OF JUNIOR HIGH SCHOOL PUPILS

Age-grade distribution. The child who enters the elementary school at the age of six, and makes regular progress thereafter, should enter the junior high school, beginning with the seventh grade, at the age of twelve. It is customary, however, to allow a range of one full year for each half grade, so that a child who enters the six-year elementary school at six or seven and completes it at twelve or thirteen is regarded as making normal progress. On this basis a junior high school pupil is considered of *normal age* if he enters the seventh grade at twelve or thirteen and completes the ninth at fifteen or sixteen. Younger pupils are regarded as *under-age* or *accelerated* and older ones as *over-age* or *retarded*.

In actual practice, however, even after allowing the latitude indicated above, not nearly all pupils in a given grade or school are of normal age. Some have the good fortune to be accelerated; and others, less fortunate, are for one reason or another retarded. The age for a given grade or half-grade constitutes, therefore, essentially a distribution. The following age-grade table, compiled by the Bureau of Education in connection with the recent survey of the schools of Wilmington, Delaware, will serve to illustrate the nature of such distributions:

AGE-GRADE DISTRIBUTION OF ENROLLMENT (WHITE SCHOOLS), WILMINGTON, DEL.
1919-1920¹

AGE	6	7	8	9	10	11	12	13	14	15	16	17	18	
Grade														Total
I	1,254	559	146	43	12	6	3	2	2					2,027
2	79	627	379	160	60	23	17	4	3	1				1,353
3		1	71	572	411	208	88	37	19	2	2			1,411
4			11	86	441	412	248	122	78	25	3	2		1,428
5			1	2	55	389	437	207	159	76	14			1,340
6					1	69	456	439	344	167	33	8		1,518
7						3	63	364	358	210	59	9	2	1,068
8							1	42	238	198	95	16		590
I								16	49	191	206	98	40	600
II									29	114	99	55	19	316
III									3	14	63	61	41	182
IV										2	11	45	108	166
Total	1,334	1,269	1,185	1,111	1,153	1,322	1,247	1,251	906	543	306	203	169	11,999

All told, 70.18 per cent of the pupils in the white schools of Wilmington were of normal age, 5.07 per cent were accelerated, and 24.75 per cent were retarded. For the country at large, the percentage of those accelerated appears to be somewhat greater and the percentages for the normal and the retarded appear to be slightly smaller. Accord-

¹ U. S. Bureau of Education, *Bulletin No. 2*, 1921, Pt. I, p. 50.

ing to a recent report of the Bureau of Education 12.6 per cent of the pupils enrolled in eighty representative city school systems during the school year 1917-1918 were accelerated, 67.0 per cent were normal, and 20.8 per cent were retarded.¹

Retardation and acceleration in the seventh, eighth, and ninth grades. According to estimates of the Bureau of Education¹ the percentages of acceleration and retardation for the several grades of the eighty city school systems referred to above were as follows for the school year 1917-1918:

GRADE	PER CENT OF ACCELERATION	PER CENT OF RETARDATION
I	10.3	10.2
2	9.4	17.4
3	10.0	22.9
4	9.7	27.7
5	10.8	30.3
6	12.0	28.5
7	13.3	22.3
8	15.7	17.0
I	20.2	16.0
II	22.0	15.3
III	22.5	14.6
IV	22.2	13.9

The seventh, eighth, and ninth grades, it will be observed, stand midway between the elementary-school grades and the senior high school grades with regard to acceleration and retardation. Owing, in part at least, to the fact that over-age pupils leave school increasingly after the fifth grade, retardation decreases from that point on and acceleration increases.

¹ U. S. Bureau of Education, *Bulletin No. 24*, 1920, p. 33.

Elimination from the seventh, eighth, and ninth grades. According to survival percentages computed by the Bureau of Education¹ on the basis of more than a million children enrolled in eighty city school systems, the number surviving out of each one hundred beginners (including repeating and retarded pupils) was as follows in the classes reaching the several grades in 1918:

GRADE	1	2	3	4	5	6	7	8	I	II	III	IV
Number surviving	153	120	121	122	115	109	91	75	60	38	25	20

There is obviously, as shown by the rapid decrease in the number of survivals, marked elimination from these grades. The table on page 106, compiled by Inglis² on the basis of three earlier investigations, showing the percentages in the different grades of those beginning the first grade of the elementary school, brings out the same general trend and stresses the fact that the occurrence is of long standing and the result of a more or less constant and persistent cause.

Elimination and retardation during the junior high school age. As indicated earlier, the ages for any one grade are as yet in actual practice distributed over a rather wide range. It is increasingly conceded, however, that these wide age distributions—at least in so far as they are indicative of retardation—are largely due to defects in our educational practices and that they will, therefore, tend to disappear to a great extent with the improvement of such practices. Even now, as noted earlier, it is generally agreed that

¹ *Op. cit.*, pp. 87-92; specifically p. 88.

² Inglis, Alexander, *Principles of Secondary Education*, p. 128.

GRADE	PER CENT REMAINING				PER CENT ELIMINATED			
	Thorn- dike ¹	Ayres ²	Strayer ³	Average	Thorn- dike	Ayres	Strayer	Average
I	(100)	(100)	(100)	(100)	(0)	(0)	(0)	(0)
2	(100)	(100)	(100)	(100)	(0)	(0)	(0)	(0)
3	(100)	(100)	(100)	(100)	(0)	(0)	(0)	(0)
4	90	(100)	(100)	(97)	10	(0)	(0)	(3)
5	81	(100)	95	(93)	19	(0)	5	(7)
6	68	90	74	77	32	10	26	23
7	54	70	63	62	46	30	37	38
8	40	50	51	47	60	50	49	53
I	27	40	39	35	73	60	61	65
II	17	20	22	20	83	80	78	80
III	12	12	18	14	88	88	82	86
IV	8	10	14	11	92	90	86	89

a pupil should enter the seventh grade at twelve or thirteen and complete the ninth at fifteen or sixteen. On the strength of this we are justified in assuming that the junior high school age extends primarily over the age interval from twelve to sixteen.

The report of the Bureau of Education to which we referred above throws some very interesting light upon elimination from the standpoint of age.⁴ It was found in the case of the eighty city school systems that more children were enrolled in our schools, public and private, at the age of nine than at any other age. Of the nine-year-olds not enrolled in private schools, 3.44 per cent had no school connections. The remaining 96.56 per cent were enrolled

¹Thorndike, E. L., "The Elimination of Pupils from School." U. S. Bureau of Education, *Bulletin No. 4*, 1907, pp. 11 and 47.

²Ayres, L. P., *Laggards in Our Schools*, p. 71.

³Strayer, G. D., "Age and Grade Census of Schools and Colleges." U. S. Bureau of Education, *Bulletin No. 5*, 1911, pp. 6 and 135-136.

⁴U. S. Bureau of Education, *Bulletin No. 24*, 1920, p. 93.

in the public schools. With this as a starting point the percentages of those enrolled in public schools were computed for succeeding age levels. The results are shown in the following table:

PER CENT OF PERSONS OF SCHOOL AGE NOT ENROLLED IN PRIVATE SCHOOLS WHO ARE ENROLLED IN PUBLIC SCHOOLS

AGE	9	10	11	12	13	14	15	16	17	18	19	20
Per cent.	96.56	95.09	91.19	89.73	85.12	64.61	41.16	23.86	14.70	6.62	2.10	.82

It will be observed that the percentages of pupils enrolled in the public schools decrease rapidly during the age interval from twelve to sixteen. This is largely due to the fact that pupils leave school, other causal factors such as death, migration, and early graduation from high school being relatively negligible.

Further inquiry shows that retardation is one of the outstanding causes of the elimination which occurs during this age interval. The following table, derived from the age-grade distribution of the enrollment in the white schools of Wilmington, Delaware, shows how seriously pupils are retarded at the ages in question:

AGE	12	13	14	15	16
Per cent retarded	30.9	47.6	53.5	38.1	43.4

In part the elimination in question is of course due to inadequate compulsory school legislation. That the compulsory school period should be universally extended to sixteen for full-time attendance and to eighteen for part-

time attendance needs no argument. However, the enthusiastic lawmaker must remember that this would have little effect on the evil of retardation. The latter is due to the fact that our schools have failed to adapt their practices to the needs, interests, and abilities of children. It can be corrected only through a reshaping of our educational practices.

DISTRIBUTION OF JUNIOR HIGH SCHOOL PUPILS ON THE BASIS OF MENTAL ABILITY

Our discussion of age-grade distributions has already brought us face to face with the fact that pupils vary tremendously in their achievements. Not nearly all pupils are making normal progress from the standpoint of the standards of accomplishment represented by the successive grades. Some are accelerated a year or two, and many more are retarded in varying degrees. Quantitative studies of the quality and amount of work done by the pupils of a given grade or group reveal further differences. Even on the basis of ordinary school marks, the achievements of a given group tend to approximate the form of a normal distribution. The most striking differences in achievement are of course brought to light through actual measurement by means of achievement tests. Distributions based on scores obtained through such tests are too well known to require comment here.

The measurement of mental ability through intelligence tests. Mental ability may, however, be measured most directly through the use of intelligence tests. Although viewed with marked reserve at first, such tests have in the course of a few years been perfected to the point where they afford without question more immediate and more reliable

**PERCENTAGE DISTRIBUTION OF 7,439 PUPILS IN EIGHT LOS ANGELES
JUNIOR HIGH SCHOOLS ON THE BASIS OF MENTAL ABILITY ¹**

SCHOOL	GRADE	PER CENT						RANGE	MEDIAN
		Very Su- perior ²	Superior	High Average	Average	Low Average	Inferior		
A	7	3	9	39	39	9	0.3	17-182	81
	8	13	29	35	19	3		40-194	105
	9	18	28	37	15	2		37-192	107
	7-9	10	21	37	26	5	.1	17-194	92.5
B	7	.7	5	19	42	28	5.5	4-163	62
	8	4	13	28	40	13	1.5	21-182	77
	9	11	24	29	31	4	.6	20-183	93
	7-9	4.5	12	25	38	17	3	4-183	75
C	7	1	7	25	47	17	3	8-159	70
	8	7	18	33	35	6	1	17-171	90
	9	16	31	31	19	2	1	21-181	107
	7-9	6.5	15.5	29	37	10	2	8-181	95
D	7	.3	4	12	35	34	14	6-142	62
	8	2	7	21	39	25	6	9-173	75
	9	3	15	34	34	12	2	25-161	81
	7-9	1	8	21	36	26	8	6-173	63
E	7	.4	7	16	42	28	7	13-155	60
	8	5	18	24	38	12	3	25-177	78
	9	9	28	31.5	23.5	6.5	1.5	20-189	98
	7-9	3	15	22	37	18	4	13-189	75
F	7	2	10	25	44	16	3	19-162	72
	8	9	21	35	24	9	2	8-178	92
	9	13	28	37	17	4	1	0-193	102
	7-9	7	19	32	30	10	2	0-193	85
G	7	3	12	32	43	9	.3	24-169	78
	8	5	21	41	29	3		42-195	92
	9	13	24	43	17	2	.4	25-185	99
	7-9	6	19	38	31	5	.2	24-195	89
H	7	4	12	27	41	14	2	13-176	76
	8	16	28	34	19	3	.3	32-173	95
	9	29	29	27.5	13	.5		45-205	119
	7-9	15	22	30	26	7	.9	13-205	105

¹ This table was compiled from the report of Dr. H. C. Hines, under whose direction the tests were given and the results tabulated.

² Dr. Hines used the following table of standard ratings:

140-220	Very superior	50-79	Average
110-139	Superior	30-49	Low average
80-109	High average	0-29	Inferior

indices of mental ability than any other means known. We are of course, as implied above, using the term mental ability or intelligence in a purely practical sense—in the sense of ability to achieve. Beyond this, there is as yet no general agreement as to just what mental ability or intelligence is, or what phases or aspects of it the tests measure or fail to measure. The significant thing for us is the fact that these tests enable us to measure and to forecast ability to achieve with greater accuracy than any other means at our command. The value of the tests is further enhanced by the fact that large groups may be examined on a relatively economical basis. As a rule only exceptional cases require individual diagnosis.

Distribution of mental scores of junior high school pupils in Los Angeles. During the school year 1920-1921 the Los Angeles school authorities undertook the first extensive survey of the mental ability of the pupils in the junior high schools. All pupils enrolled in the junior high schools were required to take the Terman Group Test of Mental Ability. The survey was made under the direction of Dr. H. C. Hines. The results, in the form of raw scores, are shown in the table on this page and page 109.

PERCENTAGE DISTRIBUTION OF THE MENTAL ABILITIES OF ALL JUNIOR HIGH SCHOOL PUPILS IN LOS ANGELES BY GRADES

GRADE	PER CENT					
	Very Superior	Superior	High Average	Average	Low Average	Inferior
7	2	8	23	42	21	4
8	7	19	31	31	10	2
9	14	25	34	22	4	1

The eight junior high schools on which the first table is based represent rather typical city conditions. Two receive their pupils largely from the upper classes; four of the remaining schools serve primarily the middle and working classes; another draws mainly upon the working classes and has in addition a considerable sprinkling of negroes; and one at least is largely dependent upon an essentially foreign population, drawn to a considerable extent from Mexico and southern Europe.

While the scores vary more or less from school to school and from grade to grade, certain general tendencies are strongly in evidence. For our purpose the most important tendency concerns the distribution of these scores. It will be observed that the scores for a given grade or school invariably approximate a normal distribution. In other words, the largest proportion of the scores, usually in the neighborhood of two thirds, tends to fall within the two central ranks; a much smaller proportion, about one fourth, tends to fall within the ranks on either side; and the remaining proportion, approximately one twelfth, tends to distribute itself within the ranks on either extreme. As might be expected, the distributions for some of the grades and schools are skewed; that is, a greater proportion of the scores falls within the ranks on one side than on the other.

The increase in the size of the median scores from grade to grade is largely due to the fact that the scores are raw scores and not intelligence quotients.

While it is not our purpose to make a detailed comparison of the schools in question, certain observations are in keeping. It will be observed that the median scores for the several schools vary materially. Indeed, they range all

the way from 63 to 105. This variation is of the utmost significance for those who are shaping the courses of study and the curricula for these schools. If the scores represent, as is generally assumed, a rough index of the ability of the pupils to do school work, common requirements would obviously be quite out of the question. Not only would the pupils in some of the schools be able to do nearly twice as much work as those in others, but they would probably be able to do a very different type of work.

To what extent these median mental scores represent the ultimate native intelligence of the pupils of the several groups or schools is difficult to tell. It is generally conceded that intelligence tests measure both native ability and ability acquired through experience. If all individuals had the same opportunities for experience, we should be justified in assuming that they would profit by them in proportion to their native ability, and that mental scores represent not only the present ability of pupils to do school work but also with a fair degree of accuracy their ultimate ability to achieve. However, the opportunities for experience vary so greatly with different social and economic levels that we have no right to label pupils once for all on the basis of present mental scores. About all we are justified in doing for the time being is to regard mental scores as rough indices of the present ability of pupils to do school work, and thus to use them as points of departure.

Incidentally it may be of interest to note at this point that the junior high school that draws its pupils from the best social and economic levels in Los Angeles secured the highest median mental score, and that the one that draws its pupils from the lowest levels secured the lowest median score. Of scarcely less interest is the fact that

the school that draws its pupils in large part from a foreign population — to a considerable extent Southern European and Mexican — ranks second.

Mental ability and age-grade status. As indicated above, mental ability implies primarily ability to achieve. Since the age-grade status of a pupil represents on the whole an excellent index of achievement from the standpoint of the requirements of the school, there ought to be a rather close correspondence between mental indices and age-grade status. That this is the case is brought out in a striking manner by the results of an investigation which Professor Ruch carried on in the junior division of the University High School at Eugene, Oregon, during the school year 1919-1920. After determining the age-grade status and the mental indices for all pupils in the division, Professor Ruch made a very careful comparison of the two. The results are shown in the table on page 114.

This table requires little comment. It points very clearly to a close correlation between age-grade status and mental ability as measured by intelligence tests. The scores, it will be observed, decrease rapidly and rather consistently from the accelerated to the normal and from the normal to the retarded. When the scores are expressed in terms of *mental ages* and compared with the corresponding chronological ages, the relationship between the two factors is brought out even more forcibly. In part at least, accelerated pupils are obviously accelerated because they are mentally older than the average, and retarded pupils are retarded because they are mentally younger than the average.

The fact that there is a close relationship between mental ability and age-grade status throws considerable light upon

MEDIAN MENTAL SCORES OF ACCELERATED, NORMAL, AND RETARDED
PUPILS IN THE JUNIOR DIVISION OF THE UNIVERSITY HIGH SCHOOL
AT EUGENE, OREGON¹

AGE-GRADE STATUS	NUM- BER OF PUPILS	CHRONO- LOGICAL AGE	BINET-SIMON (STANFORD)		ARMY GROUP EXAM ALPHA	CHICAGO GROUP
			MENTAL AGE	I Q.		
<i>Grade 7</i>						
Accelerated . .	6	11-11	15-1	124.0	82.5	43.0
Normal . .	19	12-11	14-1	111.0	70.0	36.0
Retarded . .	10	14-9	13-1	90.0	54.5	26.5
<i>Grade 8</i>						
Accelerated . .	25	13-0	14-9	115.0	106.0	43.0
Normal . .	13	14-0	14-8	101.0	70.0	26.5
Retarded . .	14	15-7	13-9	89.0	62.0	29.5
<i>Grade 9</i>						
Accelerated . .	9	14-0	17-0	122.0	137.0	56.0
Normal . .	12	14-11	16-9	110.5	118.0	55.5
Retarded . .	11	16-3	14-3	90.0	93.0	47.5
<i>Grades 7-9</i>						
Accelerated . .	40	13-2	15-2	117.0	104.0	43.0
Normal . .	44	13-7	15-0	105.0	85.0	35.5
Retarded . .	35	15-9	14-1	90.0	79.0	31.0

our earlier assertion that retardation is largely due to a failure on the part of the school to adapt its practices to the needs, interests, and abilities of children. As indicated above, mental ability is a variable, approximating in the case of a given group of individuals a normal distribution. Since it implies primarily ability to achieve, the amount of work that the pupils of a given school or class may be expected to do must of necessity also be a variable, approximating a normal distribution. The school has taken too

¹ Ruch, G. M., *A Study of the Mental, Pedagogical, and Physical Development of the Pupils of the Junior Division of the University High School, Eugene, Oregon*. University of Oregon Publications, Vol. I, No. 7, September, 1920.

little account of this fact thus far. It has most often set its standards more or less empirically in keeping with the ability of the average. These standards were of course too low for those who possessed more than average ability and too high for those whose ability ranged below the average. In consequence, some of the abler pupils acquired an accelerated age-grade status, and most of those who ranked below the average became retarded.

There are of course other factors than uniform quantitative requirements in school work that make for retardation. One of the most important of these is the fact that the school has been too insistent in demanding the same kind of work of all pupils. The fact of the matter is that mental ability varies qualitatively as well as quantitatively. In other words pupils not only vary in the amount of work which they can do, but also in the kind of work which they can do best. Unfortunately we know much less about qualitative variation in mental ability than we do about quantitative variation. The intelligence tests which are commonly given to junior high school pupils measure primarily their ability to do a fairly abstract type of school work. The tests give us little insight into the specialized abilities and peculiar aptitudes of pupils. However, we know from practical experience that there are vast individual differences in this respect and that many pupils are apt to make much more satisfactory progress when a reasonable allowance is made for this fact.

PHYSIOLOGICAL MATURATION AND JUNIOR HIGH SCHOOL PUPILS

The process of physiological maturation. Beginning with the second decade of his existence, and sometimes a

trifle earlier, the individual enters upon a period of development which prepares him for procreation. The developmental process which takes place during this interval is commonly spoken of as physiological maturation. It begins the moment that the changes involved in the establishment of this function set in, and terminates as soon as the function as such has become definitely established.

The fact that the individual has reached physiological maturity does not imply, of course, that he is physically mature or marriageable. Physical maturity, with which biological fitness for marriage is closely identified, implies a fairly close approximation to complete bodily growth, in height at least; and this the individual does not attain until some three years after he has reached physiological maturity.

Puberty. The term puberty is quite commonly used to designate the interval, or the age, during which physiological maturation takes place. Sometimes it is used in a somewhat more limited sense to designate the last part of the period, or more specifically the time at which the individual reaches maturity. We shall use it to designate the interval during which physiological maturation takes place. In this sense it covers a period of approximately three years immediately preceding the time at which the individual reaches maturity. As will appear later, this is the interval during which the adolescent spurt in growth, in so far as it takes place, occurs. We shall speak of the interval as such as the period of early adolescence. The three-year interval which follows upon maturity — the interval during which the individual practically completes his growth in height — we shall designate as the period of later adolescence. An interval thereafter may be designated as post-adolescence.

The terms pre-pubescent, pubescent, and post-pubescent are often used in classifying children by stages of physiological maturation. The term pubescent is descriptive of a brief period of development centering about the time at which the individual reaches physiological maturity. An individual who has not entered upon this stage of development is characterized as pre-pubescent, and one who has passed it as post-pubescent. Unfortunately, pubescence is in this sense not synonymous with puberty or early adolescence as defined above. It represents only the last part of the three-year interval during which physiological maturation is commonly under way—the part during which the transformation is most obvious. Accordingly many individuals who have actually begun to mature, as evidenced by acceleration in physical growth and changes in behavior, are classed as pre-pubescents, with the implication that they are still on the childhood level.

It would be better, in educational literature at least, to discontinue the terms pre-pubescence, pubescence, and post-pubescence, and to substitute in their place the terms immature, maturing, and mature. In this sense an immature individual would be a child who has not yet entered upon any of the changes which are involved in physiological maturation; an individual who is maturing would be one in whom the changes are under way; and a mature individual would be one in whom the changes have essentially terminated. The individual who is maturing would be an early adolescent, and the individual who is mature a later adolescent, in the sense in which these terms were defined above.

The developmental process which takes place during puberty is a highly complex one, far too complex in fact to

be discussed in detail in this section. Moreover, the fundamental changes which take place during the interval—the maturation of the specific germ cells and the concomitant endocrine adjustment—cannot be directly observed. If it were not for the fact that these basic changes are accompanied by secondary changes which may be readily observed and utilized as criteria of pubertal development, it would be very difficult, indeed, to gain any accurate knowledge regarding puberty. Among the more obvious of the secondary criteria are: changes in voice, especially in the case of boys; growth in height, weight, and strength; mental changes, particularly from the standpoint of interests, attitudes, and emotional reactions, and very likely also from the standpoint of a general all-around quickening; and changes in behavior, especially in relation to the other sex and to the social and economic world generally.

The age at which puberty sets in varies materially with different individuals—so much so, indeed, that the norm for pubescence is, as Baldwin points out, “a distribution range” and “not an average chronological age.” There is also some difference between the sexes, the girls becoming pubescent somewhat earlier on an average than the boys. Beyond this, such factors as race, climate, nutrition, and health may make for a certain amount of variation.

Crampton examined some 3,835 high-school boys in New York City during the school years 1901-1906. The results, indicating the percentages which were pre-pubescent, pubescent, and post-pubescent at the several chronological age levels, are shown in the table on the facing page.

It will be observed that most of the boys became pubescent during the three-year interval extending from 12.25 to 15.25. At the latter age, only about one out of ten

DISTRIBUTION OF 3,835 NEW YORK CITY HIGH-SCHOOL BOYS BY CHRONOLOGICAL AGE AND STAGES OF PHYSIOLOGICAL MATURATION ¹

AGE	PER CENT PRE-PUBESCENT	PER CENT PUBESCENT	PER CENT POST-PUBESCENT
12.25	(81)	(16)	(2)
12.75	69	25	6
13.25	55	26	18
13.75	41	28	31
14.25	26	28	46
14.75	16	24	60
15.25	9	20	70
15.75	5	10	85
16.25	2	4	93
16.75	1	4	95
17.25	0	2	98
17.75	0	0	100

remained pre-pubescent, and seven out of ten were actually mature. The greatest numbers made the transition between the ages of 12.75 and 13.25, 13.25 and 13.75, and 13.75 and 14.25. The middle of the mean year for the ending of pre-pubescence and the beginning of pubescence, as computed by Crampton, was 14 and the average was 13.44.

Baldwin more recently checked over data based on a study of 3,600 Baltimore boys and 1,317 boys from fourteen counties of Maryland. The observations were based on criteria similar to those used by Crampton. Baldwin summarizes the results as follows:

It is found that the pre-pubescent boys range from eight and one-half to sixteen years of age in the group of country boys, and from nine and one-half to seventeen and one-half for the city boys. The post-pubescent ages range from eleven and one-half to twenty-four for the country boys and twelve and one-half to twenty-four for the city

¹ *American Physical Education Review*, Vol. XIII, p. 150.

boys. For the pubescent stages the country boys range from nine and one-half to fifteen and one-half, with the mode at thirteen and one-half, and the city boys from ten to eighteen, with the mode at fourteen. The country boys reach this period earlier than the city boys. At no age are more than 53 per cent of the age group of the city boys pubescent, or more than 40 per cent of the country boys.¹

The data for girls are not as complete. In so far as they are available, however, they are probably more reliable than those for boys, since the criteria used, including almost without exception the first appearance of the menstrual flow, were more specific. Baldwin cites data for 1,214 girls from the Baltimore Public Athletic League. The results, indicating the percentages which were pre-pubescent, pubescent, and post-pubescent at the several chronological age levels, for 759 of these girls — those falling between the ages of ten and seventeen — are shown in the table on the facing page.

It will be observed that most of the girls became pubescent during the three and one-half year interval between the ages of 11 and 14.5 — somewhat earlier than the boys. At the latter age, only about one out of twenty remained pre-pubescent, and practically eight out of ten were post-pubescent.

Baldwin cites data for four additional groups of girls — 47 from the University of Iowa Elementary and High Schools, 151 from the Horace Mann Elementary and High Schools, 56 from the University of Chicago Elementary and High Schools, and 134 from Baltimore County, Maryland. The criteria were the same as those used in connection with the previous group. The data, although based on relatively small groups, are especially valuable because

¹ *The Physical Growth of Children from Birth to Maturity*, pp. 188-189.

DISTRIBUTION OF 759 GIRLS FROM THE BALTIMORE PUBLIC ATHLETIC LEAGUE BY CHRONOLOGICAL AGE AND STAGES OF PHYSIOLOGICAL MATURATION ¹

AGE	PER CENT PRE-PUBESCENT	PER CENT PUBESCENT	PER CENT POST-PUBESCENT
10.0	100.00		
10.5	93.75	6.25	
11.0	100.00	0.00	
11.5	78.84	19.23	1.92
12.0	62.06	37.93	0.00
12.5	58.20	23.88	17.91
13.0	39.53	34.88	25.58
13.5	15.15	37.87	46.96
14.0	15.38	38.46	46.15
14.5	4.83	17.74	77.42
15.0	0.00	14.54	85.45
15.5	1.55	7.81	90.62
16.0	2.04	6.12	91.83
16.5	0.00	3.17	96.83
17.0	0.00	0.00	100.00

of the care with which they were obtained. The results, indicating the percentages which became pubescent at the successive chronological age levels, are shown in the table on the following page.

After reviewing the data for both the boys and the girls, Baldwin concludes:

These data show that among children who are best developed from a physical point of view there is no fixed age for physiological development as evidenced by the advent of pubescence or first menstruation. Adolescence does not begin at the same chronological age for all normal boys or for all normal girls, physiologically speaking. Children, boys or girls, may be of the same chronological age between ten and one-half and sixteen and one-half and differ in physiological

¹*Fifteenth Yearbook of the National Society for the Study of Education*, Part I, Chap. I, p. 17. (Adapted.)

PERCENTAGE DISTRIBUTION OF PHYSIOLOGICAL MATURATION FOR FOUR GROUPS OF GIRLS¹

AGE IN YEARS	UNIVERSITY OF IOWA SCHOOL GIRLS	HORACE MANN SCHOOL GIRLS	UNIVERSITY OF CHICAGO SCHOOL GIRLS	BALTIMORE (MD) COUNTY SCHOOL GIRLS
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
10	0.00	0 00	0.00	2.23
11	8.51	4.63	5.35	7.46
12	19.14	16.55	16.06	20 14
13	38.29	37 08	39.28	29.84
14	21.27	27.81	25.00	26.85
15	12.76	11.25	10.71	9.70
16	00.00	2.64	3.57	3.72
Median	13 yrs. 7 mos.	13 yrs. 9 mos.	13 yrs. 9 mos.	13 yrs. 8 mos.

age one to four or five years and still be normal in physical development. The norm for pubescence is a distribution range, not an average chronological age.²

Physiological maturation as related to height, weight, and strength. That there is a close relationship between physiological maturation and such physical traits as height, weight, and strength is shown in a variety of ways. It has long been known, for instance, that at a given age level those children who are maturing are taller, heavier, and stronger than those who are still immature, and that the mature in turn excel those who are maturing. The results of Crampton's investigations, which are shown in the following table, indicate that this is true, in the case of groups at least, without exception up to the age of about sixteen.

¹ *Physical Growth of Children from Birth to Maturity*, p. 190. (Adapted from Table XLI.)

² *Op. cit.*, p. 191.

RELATIONSHIP BETWEEN HEIGHT, WEIGHT, AND STRENGTH AND STAGES OF MATURATION¹

AGE IN HALF YEARS	HEIGHT IN CENTIMETERS			WEIGHT IN KILOGRAMS			STRENGTH IN KILOGRAMS		
	Pre-pubes-cent	Pubes-cent	Post-pubes-cent	Pre-pubes-cent	Pubes-cent	Post-pubes-cent	Pre-pubes-cent	Pubes-cent	Post-pubes-cent
12.75	144.0	147.5	150.5	35.2	36.6	(50.8)	25.6	28.2	(32.5)
13.25	144.2	148.7	153.9	35.0	37.2	44.3	26.3	28.1	33.6
13.75	145.7	150.4	155.9	35.4	37.9	43.8	27.6	30.4	35.2
14.25	146.6	150.6	157.9	35.2	38.6	45.4	27.3	30.2	37.8
14.75	147.3	151.7	158.9	36.8	39.0	47.2	29.4	30.8	38.3
15.25	149.8	151.5	160.7	37.9	38.8	47.7	29.6	31.1	40.1
15.75	149.8	153.1	162.6	36.7	41.8	49.3	32.5	30.4	42.9
16.25	151.0	152.4	164.6	(40.0)	38.3	51.6	31.7	29.6	43.8
16.75	(153.0)	151.4	165.4	(42.5)	(41.5)	53.5	(27.5)	33.2	48.3

Beyond this it is increasingly conceded that physically superior children tend to mature earlier than others. Baldwin, who has recently analyzed the growth records of many individuals, based usually upon consecutive semi-annual measurements during the elementary- and high-school periods, finds that this is quite generally true. In summarizing his findings regarding the relationship between height and maturation, he says:

The children above median height between the chronological ages of six and eighteen grow in stature and in physiological maturity in advance of those below the median height, and they may be physiologically from one to four or even five years older than those below the median height. Those above the median height have their characteristic pubescent changes and accelerations earlier than those below; there is a relative shifting of the accelerated period according to the individual's relative height.

For the girls included there is a direct correlation between the

¹ *The Psychological Clinic*, Vol. I, pp. 117-118.

advent of first menstruation and different heights of the individuals. The taller girls mature earlier than the ones below the median.¹

There was, further, a close correlation between height and weight, the taller boys and girls being usually also the heavier. This means of course that weight bears much the same relationship to maturation as does height.

The correlation between height and strength was also positive, though not as marked as that between height and weight.

Baldwin found, further, that height and weight are relatively constant factors — so much so, indeed, that “there is a great probability that a tall boy or girl at six years of age will be a tall boy or girl at twelve years of age”; that “a tall boy or girl at nine or ten will be tall at fifteen or sixteen years of age”; and that “the heavy boy or girl at six or at nine or ten will be a heavy boy or girl six years later.”² Quite apart from any adolescent acceleration, height and weight thus constitute excellent criteria regarding the probable time at which an individual will reach maturity — criteria so reliable that the prediction may be made far in advance.

Physiological maturation and physical growth. It has often been assumed that physiological maturation is always accompanied by a rather marked acceleration in physical growth. Careful investigations show, however, that this assumption, although resting at base upon facts, must be qualified materially. The general trend of growth in height and weight during the age interval from approximately six to eighteen may be observed in the following

¹ *Physical Growth and School Progress*, p. 70.

² *Physical Growth of Children from Birth to Maturity*, p. 143.

tables which were compiled by Burk on the basis of figures collected by Boas :

AVERAGE HEIGHT OF 45,151 BOYS AND 43,298 GIRLS IN THE SCHOOLS OF CERTAIN AMERICAN CITIES, WITH MEASURES OF INCREASE AND VARIABILITY

AVERAGE AGE	BOYS				GIRLS			
	Average height	Mean variation	Average annual increase		Average height	Mean variation	Average annual increase	
	Inches	Inches	Inches	Per cent	Inches	Inches	Inches	Per cent
5.5	41.7	1.7	2.2	5.3	41.3		2.0	4.8
6.5	43.9	1.8	2.1	4.8	43.3	1.9	2.4	5.5
7.5	46.0	2.0	2.8	6.1	45.7	2.0	2.0	4.4
8.5	48.8	2.1	1.2	2.5	47.7	2.2	2.0	4.2
9.5	50.0	2.2	1.9	3.8	49.7	2.2	2.0	4.0
10.5	51.9	2.3	1.7	3.3	51.7	2.4	2.1	4.1
11.5	53.6	2.4	1.8	3.4	53.8	2.6	2.3	4.3
12.5	55.4	2.6	2.1	3.8	56.1	2.9	2.4	4.3
13.5	57.5	3.0	2.5	4.3	58.5	2.8	1.9	3.2
14.5	60.0	3.3	2.9	4.8	60.4	2.6	1.2	2.0
15.5	62.9	3.4	2.0	3.2	61.6	2.3	0.6	1.0
16.5	64.9	3.0	1.6	2.5	62.2	2.2	0.5	0.8
17.5	66.5	2.8	0.9	1.4	62.7			
18.5	67.4							

It will be observed that, for boys taken in the mass, growth in height and weight is more or less periodic. There is a rather rapid increase in both of these traits during the age intervals from about 6 to 8.5 and from 12.5 to 16.5. In between is an interval of slower growth. Since the interval from 12.5 to 16.5 covers the period during which most boys mature, it is evident that maturation is, in the case of boys at least, accompanied by an acceleration in physical growth.

¹ Burk, F., "Growth of Children in Height and Weight," *American Journal of Psychology*, Vol. IX, pp. 253-326. Also quoted by Inglis, A., *Principles of Secondary Education*, p. 9.

AVERAGE WEIGHT OF ABOUT 68,000 AMERICAN CHILDREN IN CERTAIN CITIES, WITH THE ANNUAL INCREASES ¹

AVERAGE AGE	Boys			Girls		
	Average for each age	Absolute annual increase	Annual increase	Average for each age	Absolute annual increase	Annual increase
	<i>Pounds</i>	<i>Pounds</i>	<i>Per cent</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Per cent</i>
6.5	45.2			43.4		
7.5	49.5	4.3	9.5	47.7	4.3	9.9
8.5	54.5	5.0	10.1	52.5	4.8	10.0
9.5	59.6	5.1	9.3	57.4	4.9	9.3
10.5	65.4	5.8	9.7	62.9	5.5	9.6
11.5	70.7	5.3	8.1	69.5	6.6	10.5
12.5	76.9	6.2	8.7	78.7	9.2	13.2
13.5	84.8	7.9	10.3	88.7	10.0	12.7
14.5	95.2	10.4	12.3	98.3	9.6	11.9
15.5	107.4	12.2	12.8	106.7	8.4	8.5
16.5	121.0	13.6	12.7	112.3	5.6	5.2
17.5				115.4	3.1	2.8
18.5				114.9		

Incidentally it should be noted that growth in height is more pronounced during the earlier of these intervals, and increase in weight during the later. Of greater significance, however, is the fact that variation, shown unfortunately for height only, is much more marked during the later or pubertal interval than during the earlier interval.

In the case of the girls, periodicity for growth in height is less marked. The earlier growth interval, in so far as it exists at all, ends at about 7.5; the later one, also but slightly in evidence, extends from 10.5 to 13.5 or 14.5. Variation, also less noticeable than in the case of the boys, is again more marked during this interval than at any

¹ *Op. cit.*, p. 263. Also quoted by Inglis, A., *Principles of Secondary Education*, p. 10.

other. Growth in weight is more periodic. The annual increments are larger during the intervals from 6.5 to 8.5 and from 10.5 to 14.5 than in the intervening interval.

Thus far we have discussed the relationship between physiological maturation and acceleration in physical growth largely on the basis of measurements obtained from different groups of children for the several age levels. Such data are always less reliable than those based on repeated measurements of the same group, since they tend to cover up individual differences. For our purpose they are particularly unreliable, since the age at which maturation sets in varies greatly with different individuals. Each age during the early and middle teens represents varying proportions of immature, maturing, and mature individuals. There is, moreover, as indicated earlier, a close correlation between these stages of maturation and such physical traits as height and weight. This being the case, it is quite obvious that averages based on measurements of different groups of children for the several age levels must be used with marked reservation in drawing conclusions regarding the relation between physiological maturation and acceleration in physical growth.

Fortunately we are no longer entirely dependent upon data based on the measurement of different groups for the several ages. Baldwin has in recent years analyzed a large number of individual growth records, based usually upon consecutive semiannual measurements during the age interval from about 6 to 18. Since most of these records were accompanied by accurate data regarding the onset of puberty, he was able to make very valuable observations regarding the relationship between physiological maturation and physical growth.

In general he found that there is "a slight adolescent acceleration" in such physical traits as height, weight, and strength, and that this "appears earlier for girls than for boys and earlier for tall girls and boys than for those below the norms." The extent of the acceleration appeared to be largely determined by individual growth tendencies. If "the increments of growth in stature are relatively uniform before adolescence . . . this uniformity of increase tends to persist throughout adolescence." "Retardation before adolescence," on the other hand, is likely to be followed by a "rapid acceleration during adolescence as a compensating factor."

It was found, further, that the "pre-adolescent acceleration in growth of weight precedes as a rule the pre-adolescent acceleration in growth in height."¹

Especially significant are Baldwin's findings regarding the relationship between the adolescent acceleration in growth, in so far as this takes place, and the onset of maturity, as evidenced by the appearance of first menstruation in the case of the girls. He summarizes his findings regarding the groups of girls observed at the Horace Mann, University of Chicago, and Francis W. Parker schools as follows:

For the girls who matured at eleven years the increment of growth increased rapidly from nine to eleven and dropped rapidly almost to the one centimeter point at fourteen. For those girls who matured at twelve years of age there was an increase in the average increment until eleven, then a slight drop, and after twelve a rapid cessation until fifteen, when it was below the one centimeter increment. For those who matured at thirteen there was a slight drop at ten and an increase until twelve, then a drop to less than one centimeter at six-

¹ *The Physical Growth of Children from Birth to Maturity*, Chap. V, especially p. 73 and pp. 92-94.

teen. For those who matured at fourteen there was a slight drop until seventeen, at which age the average is less than one centimeter. For the fifteen-year-old girls there was a relatively high increment until fourteen years, when there was a rapid decrease to less than one centimeter at seventeen. For sixteen-year-old girls the rapid drop also began at fourteen years and reached the minimum at eighteen years of age.¹

Physiological maturation and mental development. Our knowledge regarding the relationship between physiological maturation and mental development is very limited, much more so than that regarding the relationship between physiological maturation and physical growth. In part at least this is due to the fact that it is much more difficult to measure mental traits than physical traits. Indeed, the technique for measuring mental traits with some degree of accuracy has been developed only very recently and is in large part still in the making.

The earlier investigations in this field, aside from being handicapped by an inadequate technique for measuring mental traits, concerned themselves too often with striking rather than typical cases. This often gave rise to conclusions which were not permanently tenable. It was long maintained, for instance, that the mental activities of the child were radically different from those of the adolescent and that the transition from childhood to adolescence was uniformly rather sudden and abrupt. As Dewey points out, childhood was regarded as "almost entirely unreflective — a period of mere sensory, motor, and memory development," while adolescence was supposed to bring on rather suddenly "the manifestation of thought and reason."

The critical reaction to this point of view has in some

¹ *Op. cit.*, pp. 194-195.

instances, as might be expected, shown a disposition to go too far toward the opposite extreme. On the whole, however, it has been constructive and has led to a sounder conception of the mental changes which characterize the transition from childhood to adolescence. Dewey's statement in the following paragraph is illustrative of this fact. He says :

Adolescence is not, however, a synonym for magic. Doubtless youth should bring with it an enlargement of the horizon of childhood, a susceptibility to larger concerns and issues, a more generous and a more general standpoint toward nature and social life. This development affords an opportunity for thinking of a more comprehensive and abstract type than has previously obtained. But thinking itself remains just what it has been all the time : a matter of following up and testing conclusions suggested by the facts and events of life. Thinking begins as soon as the baby who has lost the ball that he is playing with begins to foresee the possibility of something not yet existing — its recovery ; and begins to forecast steps toward the realization of this possibility and, by experimentation, to guide his acts by his ideas and thereby also test the ideas. Only by making the most of the thought-factor, already active in the experiences of childhood, is there any promise or warrant for the emergence of superior reflective power at adolescence, or at any later period.¹

It is now generally conceded that mental development is on the whole gradual rather than saltatory. This does not, however, preclude the possibility of a certain degree of fluctuation along with fluctuation in physical growth. Indeed, since mental activity is in the last analysis a function of the body as such, it is only reasonable that there should be a close relationship between mental and physical development. Nor does the fact that mental development is on the whole gradual imply that the mental life of the

¹ Reprinted from Dewey's *How We Think* (pp. 65-66), by special permission of D. C. Heath and Company. All rights reserved.

youth differs from that of the child only quantitatively. On the contrary, the responses of the typical youth are on the whole so very different from those of the typical child that one is forced to infer marked qualitative differences as well.

Baldwin, who has given the problem of the relationship between physiological maturation and mental development much attention in recent years, holds that the two are intimately related. In connection with one of his earlier investigations he made a careful comparison between the physical development and the school progress of a considerable number of boys and girls from the Horace Mann School at Teachers College, Columbia University, and the Francis W. Parker School in Chicago. In general the results showed that there are "waves or nodes" in mental development, as indicated by the school marks obtained by pupils from year to year, and that these are closely related to fluctuations in physical growth. Especially obvious was the fact that children who excelled in such physical traits as height, weight, and lung capacity were physiologically more mature than others and mentally superior to them. Baldwin characterizes the situation as follows:

Among the boys and girls, those of normal age or younger maintain a better school standing, both as to grade and mark, than those over age for the grade. This is important; why do these pupils of normal school age or under maintain this better school standing? A careful study of sustained absences does not account for the conditions, though absence and a study of diseases and accidents aid somewhat. The explanation lies in the advanced maturity of the pupils. Since we have no recourse to consecutive mental tests throughout the elementary life of these pupils, but since we have recourse to their consecutive physical measurements in height, weight, and lung capacity, the problem resolves itself into finding the relation between growth

and school standing. The previous study of these individuals, together with their weight, height, and vital indices, diseases, and physiological changes, shows that the taller, heavier children mature physiologically in advance of the shorter, lighter ones; and a study of ages, grades, and the marks of the boys shows that those above the average height of the group, i.e., those whose physiological age is accelerated, complete the last grade of the elementary school at 12 years and 9½ months of age with an average of 84.35, and those below average height or of retarded physiological development complete the elementary school work at 13 years and 7¼ months of age with an average of 81.72.

The taller, heavier, or physiologically accelerated boys and girls complete the elementary school at an earlier age and with a higher average mark than the short, light, or physiologically retarded boys and girls. In following the present investigation the reader should be careful not to confuse brightness or precocity with stages of mental maturity. A mind may be more nearly mature than another and still be of inferior quality. The former has certain instincts and mental traits associated with growth which the latter has not experienced. The former is accelerated in growth physiologically.¹

Later Baldwin measured the mental ability of certain groups of children — superior boys and girls and average boys and girls — by means of the Stanford Revision of the Binet Scale, the tests being repeated at consecutive intervals. On the strength of the scores thus secured he computed the mean mental ages and the intelligence quotients for the several chronological age levels and constructed mean mental age and intelligence quotient curves.² The mean mental ages and the annual increments in mean

¹ Baldwin, B. T., "Physical Growth and School Progress." U. S. Bureau of Education, *Bulletin No. 10*, 1914, p. 82.

² Baldwin, B. T., and Stecher, Lorle L., *Additional Data from Consecutive Stanford-Binet Tests* (supplement to *Iowa Studies in Child Welfare*), Vol. II, No. 1, pp. 4-5. For the original report see *Mental Growth Curve of Normal and Superior Children*, by the same authors.

mental ages covering the age interval from five to sixteen are shown in the following tables :

MEAN MENTAL AGE IN MONTHS OF SUPERIOR AND AVERAGE BOYS AND GIRLS FOR SUCCESSIVE CHRONOLOGICAL AGES (BASED ON CONSECUTIVE EXAMINATIONS)

CHRONOLOGICAL AGE	Boys		Girls	
	IQ 110+ (Superior)	IQ 90-110 (Average)	IQ 110+ (Superior)	IQ 90-110 (Average)
5	72	61	73	62
6	89	76	86	73
7	103	87	101	88
8	121	100	119	96
9	134	112	131	114
10	146	124	145	123
11	160	132	160	134
12	181	141	184	147
13	191	156	200	159
14	205	167	205	174
15	213	180	216	180
16	212	201	221	198

ANNUAL MEAN MENTAL AGE INCREMENTS IN MONTHS OF SUPERIOR AND AVERAGE BOYS AND GIRLS (BASED ON PRECEDING TABLE)

CHRONOLOGICAL AGE	Boys		Girls	
	IQ 110+ (Superior)	IQ 90-110 (Average)	IQ 110+ (Superior)	IQ 90-110 (Average)
5-6	17	15	13	11
6-7	14	11	15	15
7-8	18	13	18	8
8-9	13	12	12	18
9-10	12	12	14	9
10-11	14	8	15	11
11-12	21	9	24	13
12-13	10	15	16	12
13-14	14	11	5	15
14-15	8	13	11	6
15-16		21	5	18

An examination of the tables on page 133 shows that there is a rather noticeable acceleration in mental growth in each of these groups at the chronological age levels most intimately associated with physiological maturation. In the case of the superior boys and girls, who are known to mature earlier than average boys and girls, this spurt is most noticeable between the ages of eleven and twelve. In average boys and girls it is most pronounced between the ages of fifteen and sixteen. In commenting on this spurt, Baldwin says :

As previously pointed out, this adolescent spurt is analogous to the adolescent acceleration so frequently found in physical growth curves in height, weight, and breathing capacity and other physical traits.¹

In an earlier discussion, when the data were available only up to the age of fourteen, he said in part :

There has been in recent years a movement to discredit characteristic changes in intellectual traits as a result of adolescence. This point of view, which is probably a reaction to undue sentimental emphasis of those changes current in the psychology of twenty years ago, is well expressed by Terman (*Stanford Revision of the Binet-Simon Scale for Measuring Intelligence*, p. 60) who maintains there is little evidence of periodicity or irregularity, as far as general intelligence is concerned, and throws doubt on the existence of the adolescent spurt. Although there is obviously no time in the mental development of the child when new mental traits suddenly appear, the rise in the mental growth curves apparent at the ages of 11 to 14 may be attributed to increased strength of traits that have long been developing, or to increased mental vigor similar to the accelerated growth in physical traits.²

Baldwin holds, further, that the mental life of the maturing and the mature differs qualitatively as well as quantitatively from that of the immature. He says in part :

¹ *Op. cit.*, p. 6.

² *Mental Growth Curve for Normal and Superior Children*, p. 12.

Physiological age is, the writer believes, directly correlated with stages of mental maturation. The physiologically more mature child has different attitudes, different types of emotions, different interests, than the child who is physically younger though of the same chronological age. While a child may be precocious intellectually, and have a rich intelligence quotient, and pass beyond its chronological age in the development of certain mental traits, other types of traits indicative of mental maturity may be undeveloped.¹

Physiological maturation and the disturbance of personality. We shall use the term personality here largely in the behavioristic sense, to designate the individual's capacity to deal with his environment.² The whole problem is so vast, however, that we shall be able to do little more than touch on a few of the high points in this brief section.

It was long maintained by those who held that there is a radical difference between the mental activities of the child and the adolescent that physiological maturation necessarily brings with it rather marked disturbances in personality. Emotional disturbances especially were stressed as almost universally characteristic of the period. In part at least these disturbances were attributed to the fact that the individual was at puberty supposed to pass rather abruptly from an individual into a social world, an event which necessarily implied radical readjustments in behavior. In general the interval during which these readjustments were effected was characterized as a period of "storm and stress."

This point of view, like that relating to the difference between the mental activities of the child and the adoles-

¹ *The Physical Growth of Children from Birth to Maturity*, p. 196.

² For an excellent discussion of personality and character from this point of view consult: Watson, J. B., *Psychology from the Standpoint of a Behaviorist*, Chap. XI.

cent, is no longer generally tenable. It was based too largely upon the experiences of striking, rather than typical or representative, cases. And yet it represents a very considerable measure of truth.

That the individual's social horizon enlarges with the advance of sex maturation cannot be denied. Indeed so obvious are the changes in his attitudes toward people and his responses to social stimuli in general that he is often figuratively said to have been born into a new world — the social world with its many and varied relationships. King aptly says :

By the first birth, the child comes into a physical environment a bundle of primitive appetites and impulses. He demands with unreasoning imperiousness that his animal wants be satisfied. He is eager to use his limbs and voice, and this eagerness brings him into contact with a wide variety of experiences. He learns how to act in the world of physical things that surround him, he learns to understand people after a fashion, but after all it is a narrow life he lives at the best. He is surrounded by the great grown-up world, but his understanding of it is at most superficial. It makes various demands on him which he only partly understands. As he approaches physiological maturity in his early or middle teens, however, he feels the throbbing of new impulses. The world of men and women gradually opens up to him and he is finally born into it. This world is a larger and more complex one than any he has hitherto known. He faces a new problem, that of learning to understand, to live, to move, in short to find himself in this larger world of social relationships, of men and women.¹

There is no evidence, however, to warrant the assumption that this new birth into the social world generally takes place suddenly or abruptly. In some cases the change is doubtless "more or less sudden" as King points out —

¹ King, Irving, *The High-School Age*, pp. 84-85.

“so sudden,” indeed, “that the child himself” may be “startled by the rapid shift in his point of view.” In other cases, however, the change may actually be “so gradual,” as King says, that the individual realizes only after a period of years that he “is somehow different from what he was to start with” and that he “no longer looks at the world with the eyes of a child.”¹

In the great majority of individuals, the change ranges probably somewhere between these two extremes. Careful retrospective analyses on the part of hundreds of typical college students lead the writer to suspect, however, that the change must be, even in the case of this middle class, far more disturbing than the superficial adult observer is likely to infer. The majority appear to be, to say the least, vaguely conscious of varying degrees of lack of adjustment. They sense the fact that they are no longer children, and realize at the same time that they do not fit into the adult scheme of things. Those who are fortunate enough to find themselves, both at home and in school, in an environment essentially suited to the needs of this age will, of course, feel much less maladjustment than those whose environment is unsuitable.

The same thing is true of the more pronounced emotional disturbances which have often been regarded as an inevitable concomitant of maturation. As a matter of fact, the assumption that these are always or generally very marked is, like the assumption of the abrupt transition itself, based too largely upon the observation of extreme rather than typical or representative cases. Under a normal home and school environment, one especially adapted to the needs of this age, there ought to be a minimum of emotional disturbance.

¹ *Op. cit.*, pp. 82-83.

It is now generally conceded by the best psychopathologists that emotional disturbances are, in so far as they are not physiologically conditioned, in large part due to lack of adjustment. The neurotic individual has, as it were, no adequate outlet for his energy, no definite channels of action into which the primal urge or drive of life may be directed. This may be due to the fact that the education of the individual did not make sufficient provision for substitute outlets, in place of the original biological outlets which are to a great extent precluded by modern civilization. Not infrequently it arises from the fact that environmental factors over which the individual has little or no control — unreasonable parents and relatives, unfavorable school conditions, poverty — tend to block such substitute outlets as have been established. It may also result from an abnormally strong natural drive. In the case of the adolescent, it is most likely to grow out of the fact that the home and the school have made inadequate provision for proper channels of sublimation and for social orientation. Almost as common a cause is the failure on the part of parents and teachers to understand the adolescent and to give him the sympathy and the enlightenment and guidance which he needs and craves. In consequence, the individual is finding himself and his place in the new social order very slowly and with much travail. Under these circumstances, emotional conflicts and disturbances are of course quite inevitable.

The individual who is fortunate enough to find himself in a suitable environment — an environment in which he meets with sympathy and understanding, with liberalization and enlightenment, and, above all, with ample opportunity for appropriate action — ought to experience a minimum of emotional disturbance.

Distribution of junior high school pupils by stages of physiological maturation. We are now face to face with the question: To what extent are junior high school pupils immature, maturing, and mature? Unfortunately the data which bear on this problem are as yet too limited and too indefinite to warrant a final answer. The best that we can do at present is to consider certain estimates and probabilities.

Some years ago Inglis took the proportions of those pre-pubescent, pubescent, and post-pubescent at the several chronological age levels, as determined by Crampton for boys and by Baldwin for girls, and applied them to the age-grade distribution of the pupils enrolled in the public schools of Paterson, New Jersey, in 1913. In this way he secured approximate estimates of the distribution of the pupils in the several grades and divisions by stages of physiological maturation. The results are shown in part in the table on the following page.

In the light of these estimates the six-year elementary school is clearly the school of the pre-pubescent, at least nine out of every ten pupils being pre-pubescent. It is equally evident that the three-year senior high school is dominantly the school of the post-pubescent, practically nine out of every ten pupils being post-pubescent. The three-year junior high school, on the other hand, appears to be the school of a much more heterogeneous group, three or four pupils out of every ten being pre-pubescent, two pubescent, and four or five post-pubescent.

In drawing conclusions on the basis of these estimates the reader must bear in mind, however, that the term pubescent is, as indicated earlier, not synonymous with the term maturing. In other words, the pubescent group does not

PERCENTAGES OF PRE-PUBESCENT, PUBESCENT, AND POST-PUBESCENT PUPILS
IN THE SEVERAL GRADES AND DIVISIONS OF THE PUBLIC SCHOOLS OF
PATERSON, NEW JERSEY, 1913¹

GRADES AND DIVISIONS	BOYS			GIRLS			BOTH		
	Pre- pubes- cent	Pubes- cent	Post- pubes- cent	Pre- pubes- cent	Pubes- cent	Post- pubes- cent	Pre- pubes- cent	Pubes- cent	Post- pubes- cent
1	100	0	0	100	0	0	100	0	0
2	99	1	0	99	1	0	99	1	0
3	97	2	1	96	3	1	97	2	1
4	92	5	3	89	7	4	90	6	4
5	81	11	8	74	15	11	78	13	9
6	69	17	14	58	21	21	64	19	17
7	56	22	22	36	26	38	46	24	30
8	35	22	43	18	25	57	26	14	60
9	22	20	58	10	19	71	17	20	63
10	12	15	73	3	10	87	8	12	80
11	2	8	89	1	4	96	2	5	93
12	1	3	96	0	1	99	0	2	98
1-6	91.2	5.2	3.6	87.5	7.0	5.5	89.4	6.1	4.5
7-9	41.4	21.3	37.3	25.3	19.8	54.9	33.7	20.6	45.7
10-12	6.7	9.7	83.6	1.5	5.4	93.1	4.0	7.4	88.6

include all the individuals in whom the changes involved in physiological maturation are under way. A considerable proportion of those who are actually maturing are included in the pre-pubescent group, since the term pubescent is applicable only to the later part of the early adolescent period. This means of course that the proportion of immature individuals is in all probability considerably smaller than that indicated in Inglis' estimates. Only those who mature very late are still immature at the age of twelve or thirteen, when pupils should enter the seventh grade, and

¹ Adapted from Tables XV and XVIII in Inglis' *Principles of Secondary Education*, pp. 28-29.

these are relatively few. We may conclude then, subject to further evidence, that the junior high school is largely concerned with two groups of children — those who are maturing and those who have already reached maturity.

OUTSTANDING CHARACTERISTICS AND NEEDS OF JUNIOR HIGH SCHOOL PUPILS

A careful study of the children who rightfully belong in the three-year junior high school shows that (1) they are primarily children twelve to sixteen years of age; (2) most of them are physiologically either maturing or mature; (3) they differ more widely among themselves from the standpoint of interests, attitudes, and achievements than at any previous age level; (4) they have not yet completed the education which all need in common; and (5) they increasingly face the necessity, as they advance through this age interval, of making important educational and occupational choices. We shall discuss these characteristics and needs in the order in which they appear.

Junior high school pupils are primarily children twelve to sixteen years of age. In our earlier discussion of the age-grade status of pupils we pointed out that children are considered normal if they enter the seventh grade at twelve or thirteen and complete it at thirteen or fourteen, if they enter the eighth grade at thirteen or fourteen and complete it at fourteen or fifteen, and if they enter the ninth grade at fourteen or fifteen and complete it at fifteen or sixteen. In keeping with generally accepted age-grade standards, then, all normal children between the age limits of twelve and thirteen on the one hand and fifteen and sixteen on the other belong in the junior high school grades, unless they have advanced more rapidly by reason of exceptional ability.

At present there are of course many exceptions. Owing to a rather persistent failure of the school to adapt its practices and requirements to the needs and capacities of children, many who are in these grades ought to be farther along, and many who rightfully belong there are elsewhere, either in the grades below or out of school altogether. This abnormal state of affairs will disappear as fast as the school succeeds in adapting its practices and requirements to the needs and abilities of children as they are, and as fast as the compulsory school age is raised to the proper level.

Most children of junior high school age are physiologically either maturing or mature. As indicated in a previous section, most children twelve to sixteen years of age are physiologically either maturing or mature. They represent, therefore, on the whole the peculiar characteristics and needs of adolescence rather than those of childhood. These we have discussed with some detail in the earlier part of this chapter. At this point we shall call attention to only two of the most outstanding of these adolescent characteristics and needs, namely, (1) the disposition on the part of the individual to assert himself—in other words, to be himself; and (2) his growing interest in social relationships.

The growing disposition on the part of the individual to assert himself manifests itself especially in an increasing impatience in the presence of the restrictions of childhood and in a growing desire to act freely and abundantly as an individual. This is a basic factor, one which the school cannot afford to overlook. In brief it means that the individual of this age demands a much greater freedom than the child, and yet not a freedom which might be in any way construed as license. It must be a wisely restricted freedom, one in which the restrictions are not too obvious.

The growing interest in social relationships manifests itself in an increasing desire on the part of the individual to participate in the affairs of the adult world. The adolescent sees in a new light the people who have all along constituted an important part of his environment. He sees them increasingly as men and women in their many and varied social and economic relationships. In this light they have a new fascination for him, a fascination which impels him more and more to explore their doings and to participate in their affairs. This, too, is a basic factor, one which the school cannot afford to ignore. It means that the adolescent demands an educational environment which will in every possible way facilitate his orientation in the adult social and economic world, and which will prepare him for effective participation in it.

Both of these characteristics of adolescents — the growing self-assertion and the increasing interest in social relationships — stress the transitional and formative character of this period. The adolescent is obviously no longer a child, nor is he as yet an adult. He is in the making, both as an individual and as a member of society. This being the case, he is, from the standpoint of his educational environment, in need of a distinctive school atmosphere, one neither too childish nor yet too adult; mature and well-balanced teachers who have a sympathetic understanding of his problems and his aspirations and who are able to guide and direct him without overt compulsion or undue restriction; ample opportunities for self-expression through varied activities, both curricular and extra-curricular; abundant opportunities to familiarize himself gradually with the affairs of men and women, their knowledge, their occupations, their standards, and their ideals, through exploratory activities

within the major academic and occupational fields; and extensive opportunities to engage in socialized group activities, both curricular and extra-curricular.

Children differ more widely among themselves during the junior high school age from the standpoint of interests, attitudes, and attainments than at any previous age level. Individual differences, as is generally conceded, come rather strikingly into the foreground during the age interval from twelve to sixteen. This does not mean of course that children are essentially alike up to the age of twelve and that differentiation sets in rather suddenly thereafter. Individual differences exist all along the line, as is amply attested by the results of mental tests and tests of achievement along various lines. At base these differences have their source in original nature. Children are born with varying capacities and tendencies from the standpoint of the interests, attitudes, and attainments in question. The subsequent unfolding of these capacities and tendencies is of course conditioned by environmental factors.

In so far as these environmental factors are supplied by the school, they are in the case of a given school system fairly uniform during the first six years of the child's school life, or up to the age of about twelve. The activities and experiences represented by the elementary-school curriculum are, in other words, much the same for all. In the face of very varying natural capacities and interests, this means of course that children will differ increasingly in achievement as they advance through this age interval. That this is actually the case is amply attested by age-grade distributions and distributions of achievement scores.

In so far as the factors in question are supplied by the home and the social and economic levels on which the indi-

vidual happens to find himself, they differ of course very greatly. Other things being equal, this is bound to make for greater divergence in interests and attitudes and in needs as the individuals advance through the age interval from six to twelve.

Another cause tending to bring individual differences into bolder relief during the age interval from twelve to sixteen is the fact that physiological maturation takes place most commonly in the course of this interval. This, as indicated earlier, entails rather striking changes in interests, attitudes, and responses. Since the age at which physiological maturation sets in varies materially with different individuals — so much so, indeed, that the immature, the maturing, and the mature are found at each age level during the interval in question — these changes in interests, attitudes, and responses put in their appearance at varying ages. In consequence children differ more widely during this age interval than at any previous time. The actual differences are of course further intensified by the fact that some of the more distinctly individual traits and characteristics put in their appearance along with physiological maturation.

The fact that individual differences come into bolder relief during the age interval from twelve to sixteen implies certain rather specific educational needs on the part of children of this age. Not only must the differences as such be discovered and evaluated, but the educational environment represented by the school must be reshaped in keeping with them. This means that the school must supply ample facilities for the exploration of pupils' interests, attitudes, and abilities; that it must organize curricular activities in such a way that pupils will have abundant opportunities to explore the major fields of

human endeavor; and that it must provide for flexible curriculum administration and elastic methods of promotion in order that there may be adequate adaptation to these differences.

Children of junior high school age have not yet fully completed the education that all need in common. Up to the age of twelve the energies of children are directed largely toward the mastery of common elements. Thereafter their interests and needs diverge increasingly. In many respects, however, common interests and needs continue far beyond this point — indeed, in some respects, throughout the entire secondary period. Children of this age are clearly in need of continued training in the vernacular and other media of social intercommunication. Training for efficient citizenship in a democracy, although of course conditioned by common achievements of the elementary period, has scarcely begun. Such training falls obviously very largely within the province of the secondary period, since it is to a very considerable extent conditioned by interests, attitudes, and responses which come into prominence only with the onset and progress of physiological maturation. Children twelve to sixteen years of age are, moreover, as repeatedly pointed out heretofore, in need of common orientation within the major fields of human endeavor. Only in this way is it possible for them to find themselves in a measure in the great world of human affairs.

Children of junior high school age face the necessity of making important educational and occupational choices. Until the compulsory school age has been generally raised to sixteen or eighteen, a large proportion of our children will continue to leave school at the age of about fourteen to enter occupations of various kinds. Others will leave upon

completing the junior high school at the age of fifteen or sixteen, likewise to enter occupations of one kind or another. An increasing number will upon graduation from the junior high school pursue specialized curricula in the senior high school. All of these children obviously face the necessity of making important educational and occupational choices during the junior high school age or shortly thereafter. This means of course that children of this age are in need of educational and occupational guidance. Only through such guidance is it possible for them to choose wisely. This being the case, we must look upon guidance as the keynote of the school for this age.

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CHAPTER V

MAJOR PURPOSES OF THE JUNIOR HIGH SCHOOL

Dominance of purpose in the movement for the reorganization of the American public school system. Superficial observers have at times been disposed to characterize the movement which has given us the junior high school as more or less of a fad; as something, in other words, which was not actuated by clearly defined aims and purposes. Nothing could be farther from the truth for the movement as a whole. Indeed, it is very doubtful whether any modern movement for educational reform has been so completely dominated by purpose as has been the movement for the reorganization of the American public school system which has given rise to the junior high school.

PURPOSES ADVANCED BY EARLY LEADERS

During the early stages the movement for the reorganization of the American public school system centered of course largely around an approximately equal division of time between elementary and secondary education. Accordingly, the earlier leaders in the movement concerned themselves primarily with a reorganization involving the adoption of the six-six plan. The idea of dividing the six-year secondary school into a junior and a senior division did not assume prominence until well toward the close of the first decade of the twentieth century.

Arguments advanced by early advocates of the six-six plan. The arguments most often advanced by early advocates of the six-six plan, or its equivalent, were: (1) that it would make for economy of time in education; (2) that it would provide a more gradual and more natural transition from elementary to secondary education; and (3) that it would result in a more suitable school for the adolescent age. Not infrequently it was maintained, further, that the plan would tend to keep children in school longer and that it would provide more favorable conditions for training in citizenship.

Economy of time in education. The argument most often advanced by early advocates of the six-six plan, from President Eliot to the Committee on Economy of Time, was that an approximately equal division of time between elementary and secondary education would make for genuine economy of time in education. They were convinced that the eight-four plan was fundamentally unsound since it allotted too much time to elementary education and too little time to secondary education. In support of this they pointed out that there was much waste in our eight-year elementary school and that the results of our four-year high school were not comparable to those of the longer European secondary schools. The waste in the case of our elementary school they attributed mainly to the fact that the curriculum for the upper grades, instead of concerning itself with the elements of the natural sciences, social sciences, foreign languages, and fine and industrial arts, was largely given over to activities which were unrelated to the needs and interests of children of this age — activities which could be mastered more advantageously rather gradually and more or less incidentally in the course of the secondary

period. The inadequacy of our high school they attributed to the fact that four years do not constitute a sufficiently long time for the mastery of the subjects which ordinarily enter into a secondary-school curriculum.

In order that these defects might be corrected, it was urged that the elementary curriculum be thoroughly purged of all nonessentials and that the elementary school be reduced to six years. This, it was pointed out, would make it possible to organize secondary education on a six-year basis and to adapt it to the needs and interests of children. Such a reorganization, it was confidently expected, would result in a truly functional scheme of elementary and secondary education, a scheme making for genuine economy of time.

A more gradual and more natural transition from elementary to secondary education. Very early during the movement for the reorganization of our school system, leaders began to stress the fact that the six-six plan would make not only for economy of time but also for a more gradual and more natural transition from elementary to secondary education. They characterized the transition in the case of the eight-four plan as abrupt and unnatural — abrupt because it compelled the pupil to change suddenly from a one-teacher to a departmental régime, from elementary to secondary studies, and from elementary to secondary methods; unnatural because it was effected for the most part at the age when adolescence had set in and the individual was in need of a well-ordered and socialized environment. They contended strongly that the six-six plan would do away with many of these evils, since the pupil would be made to pass gradually from the one-teacher to the full departmental régime and from elementary to secondary subject-matter and methods, and since the transition

would be effected for the most part either before or at about the time of the onset of adolescence.

A more suitable school for the adolescent age. Those who contended that the six-six plan would make for a more gradual and more natural transition from elementary to secondary education maintained, further, that a downward extension of the secondary school, to include the seventh and eighth grades, was highly desirable because it would make the secondary school essentially the school of the adolescent age. The character of such a school — its subject-matter, its methods, and in fact its whole atmosphere — it was pointed out, would be largely determined by the needs of adolescents and would, therefore, constitute a far more suitable educational environment for seventh- and eighth-grade pupils, who are for the most part early adolescents, than the elementary school, the character of which must in the very nature of the case conform primarily to the needs of childhood.

PURPOSES ADVANCED BY REPRESENTATIVE LEADERS IN THE JUNIOR HIGH SCHOOL MOVEMENT

With the beginning of the second decade of the twentieth century the six-three-three plan came increasingly into favor among educators, both in theory and in practice. This, it should be borne in mind, implied in no sense a repudiation of the basic principles underlying the six-six plan. On the contrary, those who advocated the six-three-three plan were for the most part staunch supporters of the principle that there should be an approximately equal division of time between elementary and secondary education. In contrast with other advocates of the six-six plan, they were convinced, however, that the aims of the secondary

period could be realized more effectively if it were divided into two divisions of about the same length. The reasons which they advanced in support of the new plan indicate quite unmistakably that they had a remarkably clear and comprehensive grasp of the fundamental purposes of the lower or junior division of the secondary period. Indeed, so basic are the points of view of these leaders, and so essential are they to any adequate understanding of the purposes of the junior high school, that we shall set them forth in some detail in the following pages.

Francis. Shortly after organizing the first junior high schools in Los Angeles, Francis delivered an address before the Department of Secondary Education of the National Education Association in which he set forth the purposes of the new institution as he saw them. They may be conveniently summarized as follows:

I. *To furnish a suitable educational environment for the early adolescent.* In order to create such an environment it was necessary that the junior high school give pupils an opportunity — (1) “to do some thinking for themselves”; (2) to gain enriched experiences through shops, laboratories, auditoriums, and libraries; (3) to come in contact with superior teachers, including a larger proportion of men; (4) to explore themselves from the standpoint of their interests and capacities through differentiated curricula, elective and exploratory studies, educational and vocational guidance, and the pursuit of vocational activities; and (5) to develop social responsibility and self-responsibility through participation in student government and other extra-curricular activities. Francis felt, further, that it would be very difficult to create such an environment in a school where children outnumber adolescents. He said in part:

Our grade schools are usually dominated by the atmosphere of the child world or the world of men and women. It is a rare corps of teachers with a rare principal who succeed in harmoniously blending the two worlds. Much of the lack of interest in, and the dissatisfaction with, his school and most of the bluff and bluster of the average eighth-grade boy are due to his environment which is not in harmony with his nature. The average eighth-grade girl is equally though perhaps differently affected.¹

II. *To provide for a gradual transition from elementary- to secondary-school practices.* This was to be accomplished through the gradual introduction of departmental teaching and the methods and content of the secondary school.

III. *To effect economy of time in education.* Regarding the realization of this purpose, which was to be achieved primarily through the earlier introduction of secondary-school subject-matter and through improved methods of teaching, Francis said :

I do not hesitate in the belief that under a well organized system of intermediate schools children will finish the ninth grade at least a year ahead in development, possession of knowledge, and the power to acquire it of the ninth-year pupil under the present plan.²

Davis. As an ardent champion of the six-six plan, Davis early began to espouse the cause of the junior high school. He stressed the following as the primary purposes of the new institution :

I. *To furnish a suitable educational environment for the early adolescent.* In considering Davis' point of view it should be borne in mind that he made a rather clear-cut distinction between elementary and secondary education. The former was to supply the fundamental training and instruction needed by all ; and the latter, the differentiated instruction and training necessitated by varying individual

¹ *N. E. A. Addresses and Proceedings*, 1912, p. 373. ² *Op. cit.*, p. 373.

and social needs. As far as possible, the transition from one régime to the other was to be effected with the onset of puberty, to conform with the changing interests of the individual. The age of twelve or thirteen, Davis pointed out further, marks the beginning of puberty much more accurately than the age of fourteen or fifteen, and so constitutes normally the optimum age for the transition from the elementary to the secondary régime. The first cycle of the secondary period should, therefore, begin with the seventh grade and continue through the eighth and ninth grades.

II. *To help the individual to find himself.* If differentiated instruction is to be administered effectively in accordance with varying individual and social needs, the latter must obviously be determined with a reasonable degree of accuracy. Davis was keenly aware of this. Indeed, in his estimation it was the chief function of early adolescent education to help the individual to find himself. Only in proportion as the junior high school made provision for this could it be regarded as constituting a suitable educational environment for the early adolescent. He said in part:

In formulating a program of studies for this school [six-year secondary school] two guiding educational principles must be kept constantly in mind. First, the period of early adolescence is a period of exploration and self-discovery. Young people at this age are prone to dream dreams and inclined to see visions. Varied and unstable ideals completely fill the horizon. But the power of persistent effort toward the attainment of the ideal goals is usually far from commensurable with the strength of the impelling desire. In consequence the period is preëminently a period for developing the power of appreciation of forms, and not to any considerable degree a time for attaining a mastery of principles. . . . The early years of adolescence should be years of self-testing and self-discovery, and the junior high school a testing place and testing ground wherein opportunities are provided for "browsing around" and for disclosing permanent aptitudes and

interests. Second, once these dominant talents have been revealed, perfection of character and attainment can be gained only through a systematic and continuous exercise of them. Hence it follows that guarantees for a continuity of effort must be given if the most desirable ends are to be effected.¹

In his recent book on the junior high school, Davis summarizes his point of view as follows:

Thus it may be said by way of summary that the junior high school should endeavor —

1. To check the withdrawal of pupils from the seventh, eighth, and ninth grades by providing school work that is both more interesting and educationally more valuable than that furnished by the traditional school, and by organizing and administering this work through methods that are more in keeping with the natures of adolescent pupils than are the methods commonly employed in the traditional elementary schools and senior high schools.

2. To encourage and assist pupils to discover their own permanent interests, their own reaches and limits of capacities, and their own best modes of self-expression, and then to assist them to choose life careers in which (so far as enlightened human judgment is able to forecast) they can be most happy and contented and at the same time socially effective and serviceable.

3. To remove, or at least to minimize, the personal and social dangers which inhere in the instincts of adolescence, and to convert raw potentialities into habits that make for good citizenship, workmanship, sportsmanship.

4. To shorten the period of training for some few individuals who have before them a long course of systematic schooling, by permitting them to begin their differentiated education at an earlier age than has been customary in the past.

5. To provide a truly realistic education for all youths between the ages of twelve and sixteen, and, while adapting this training to individual needs and interests, so to administer it that each shall come

¹ Davis, Calvin O., "The Subject-Matter and Administration of the Six-Three-Three Plan of Secondary Schools." University of Michigan, *University Bulletin* No. 9, N. S., Vol. 17, Sept., 1915.

to possess at least an appreciative knowledge of all the major activities of humanity and shall develop a tolerance and a sympathy for individuals outside his own social group.

6. To interweave pre-vocational instruction and liberal culture so artfully that each shall have the effect of clarifying, deepening, and making truly significant and effective the elements of learning contributed by the other.¹

Bunker. Like Davis, Bunker made a rather clear-cut distinction between elementary and secondary education. He felt that the former should meet the needs of childhood while the latter should be adapted to the needs of adolescence. In criticising the eight-four plan in the light of this principle, he said :

Eight years in the life of the child, beginning with the age of six, carry him beyond the time necessary to acquire the tools of an education, and beyond the first natural division in his life, viz., that which comes with the dawn of adolescence. Its expiration finds him, if he has made normal progress through the grades, fully two years advanced into a period where nature demands a very different content and treatment from that in the period when the rudiments of education are being acquired. While the advent of adolescence brings no greater break than does the change of night into day, yet as night differs from day, imperceptible though the transition from one to the other may be, so the characteristics of the child differ from those of the youth. The school system, in its organic form and in the articulation of its parts, completely ignores the significant physiological and psychical changes which are ushered in with the advent of adolescence. That this phenomenon in human development is ignored accounts in a very large degree for the rapid elimination in the upper grammar grades; nor will this loss be greatly decreased until an intelligent attempt is made by the educators to shape the system and the content of the courses to meet the needs that demand satisfaction.²

¹ From Davis' *Junior High School Education*. Copyright (1924) by World Book Company, Yonkers-on-Hudson, New York.

² Bunker, F. F., "Reorganization of the Public School System." U. S. Bureau of Education, *Bulletin No. 8*, 1916, pp. 101-102.

Not content with criticism alone, Bunker proceeded to reorganize the schools of Berkeley, California, on a six-three-three basis as early as 1910. He stressed the following as the outstanding purposes of the junior high school division:

I. *To provide a gradual transition from the elementary school to the upper division of the secondary school.* Regarding this he expressed himself as follows:

In this general arrangement the lower high school is viewed as providing a three-year period between the elementary school, on the one hand, and the upper high school, on the other, which should be looked upon primarily as a transition period from the one to the other in everything except the content of the school courses. Under the traditional organization the break between the elementary school and the high school is a distinct one for the child. Standards of scholarship, methods of instruction, and methods of administration are all different. In short, under the customary procedure, the child enters a new world, and in all of these important particulars without preparation for it. The lower high school provides a three-year period, during which the chief objective in matters pertaining to school administration is that of a gradual transition from the machinery of the elementary school to that of the high school.¹

II. *To provide an educational environment especially suited to the early adolescent.* To create such an environment, Bunker held that it was necessary—(1) to bring together in one institution a fairly large group of seventh-, eighth-, and ninth-grade children, partly to insure a common atmosphere and partly to render feasible certain administrative features; (2) to offer a reasonably rich and flexible curriculum in order that pupils might choose their studies in keeping with their interests and capacities and advance as far as possible in keeping with their abilities; (3) to provide opportunities

¹ *Op. cit.*, p. 106.

for socialization, especially through extra-curricular activities; (4) to secure superior teachers, including a greater percentage of men; (5) to furnish information and experiences regarding common vocations; and (6) to organize the courses of study on a general basis in order that pupils might make a survey of the chief departments of human knowledge and discover themselves from the standpoint of their interests and capacities.

His statement regarding the need of general courses was so comprehensive, and is so pertinent even today, that we shall quote him at length. He said:

In this secondary period it is important that a survey of the chief departments of human knowledge be made before the individual settles down to an intensive study of lines which are intended to converge toward his future specialty. The work of the first cycle of this period, then, can well comprise the giving of courses in general science, general mathematics, general history, literature, courses affording a start in the languages for those desiring language study, music, art, and finally, that special knowledge which science contributes relating to personal and sex hygiene, without which neither physical nor moral health can long be conserved. Thus landmarks in the chief fields of knowledge will be established which will serve to orient the pupil to a degree in the totality of race experience and culture. Furthermore, such a survey, extensive and popular rather than intensive and narrowly scholarly, harmonizes completely with the natural impulses of those entering the period of adolescence which demands change, variety, and human interest rather than completeness and logical arrangement. Again, by passing in procession before the student of this age the salient features of the important departments of knowledge, opportunity will be given for the determination of individual aptitudes and the forming of interests which may prove permanent in their enduring, and which also may fundamentally and completely modify the future course of the individual's development. Courses such as can be formulated from this point of view will provide an excellent "topping off" for those who find it impossible to continue their

schooling beyond the end of the ninth or tenth year, and for those who are able to remain throughout the last cycle of the period such courses will give an excellent introduction to the more intensive work which can and should be expected in the advanced years of secondary-school training.¹

Johnston. Johnston was not only an enthusiastic supporter of the junior high school movement, but he thought of it in the broadest and most fundamental terms, as is evident in the following statement :

The adequate definition [of the junior high school] must be in terms of the profound meaning of the movement — if it is profound. The junior high school in this deeper sense suggests the breaking up of our elementary-secondary public school system into smaller, more intelligible and less unwieldy administrative and curriculum units. It is but a rediscovery of what European nations, in their more intensive cultivation of the restricted and selected field of secondary education, have found to be an administratively and pedagogically necessary arrangement. Thinking from the point of view of American democracy, we have first thought all *into* the secondary system as a matter of citizen's right. We have not thought yet sufficiently of how to group and adjust our administrative machinery and instructional program to them, now that we have them enrolled. European school builders and curriculum makers, thinking not of how to populate secondary schools but how to select, have had their genius challenged not with a condition of democracy but with the problem of how best to organize logically, and hence economically, the various subject-matters offered throughout the twelve years of the complete selective secondary-school period. They are ahead of us therefore in economic methods of breaking up into curriculum units the twelve-year stretch of education which we in America wish to make as nearly universal as possible. The French "cycle" scheme for curriculum organization represents an established principle of curriculum construction which the junior high school promoters have been quick to adopt in theory. To practice this principle effectively will take time. A reconception

¹ *Op. cit.*, p. 146.

of the subject-matter of public education in terms of one six-year elementary functioning unit, one intermediate three-year transition period, partaking in content, method, administration, and school atmosphere of both the elementary and the secondary, and one three-year period of genuinely secondary work is fundamental indeed. Nothing less than this is the real meaning of the junior high school. . . .

The junior high school is more than anything else a term adopted to denote design in our educational organization and administration. It means that something other than tradition and accident has come to influence our development. It means some sort of uniqueness both in the pedagogy of school subjects new and old and in the spirit of our administration. It means the Americanization of a world-tested principle of curriculum-building. It means flexibility and, therefore, science in the manipulation of our total school plants. Meaning in a restricted sense reorganization of the three intermediate grades, it in reality means reorganization of the entire public school system.¹

As outstanding purposes of the new institution, Johnston stressed the following:

I. *To provide a gradual transition from elementary to secondary education to the end that the public school system might be thoroughly democratized.* In order that the junior high school might realize this purpose, he pointed out that it must partake in "content, method, administration, and school atmosphere of both the elementary and the secondary" school, and that it must practice genuine pupil democracy by admitting and caring for all children of junior high school age, irrespective of their age-grade status.

II. *To furnish a suitable educational environment for children of junior high school age.* Such an environment, he held, necessitated among other things — (1) an improved school plant; (2) better teachers and better supervision;

¹ Johnston, Charles Hughes, "The Junior High School." *Journal of Educational Administration and Supervision*, Vol. II, pp. 417-423.

(3) a thoroughgoing reorganization of subject-matter; (4) adequate curriculum differentiation in keeping with the requirements of individual differences; and (5) educational diagnosis and guidance.

In speaking of the reorganization of subject-matter he said :

Every single subject now found in the three grades concerned will undergo — indeed is already undergoing — transformation. New principles of organizing so-called general courses in all the main lines of junior high school work — English, mathematics, general science, general social science, foreign languages, practical arts, commercial work — all presage an educational era for the making of better pedagogically constructed “units of instruction” and topical and problem goals of intermediate education, which is surely going to point us to new meanings of educational method.¹

Regarding curriculum organization he said :

Indeed curriculum differentiation is the crucial issue, whatever we do about it. We have already in our crudely conceived pre-vocational education begun to adjust our instruction in this prudent way to some sort of inevitable industrial test to come in the life of the junior high school pupil, saving him all the while from narrow specialization. Already also we have become increasingly convinced, from our crude scales and tests, of the consistent evidences of the inherent and universal natural differentiation among these children. No “common elements” can produce like effects. Here it takes *uncommon* elements to produce similar effects. Future probable careers suggest some flexibility in our courses; *this relatively constant proportion of poor, medium, and superior students reinforces the suggestion.*²

In discussing the function of the junior high school in administering educational diagnosis and guidance, he said in part :

¹ *Op. cit.*, p. 420.

² *Op. cit.*, pp. 420-421.

If the junior high school is anything it is the three-year section of our public school system, which . . . seeks to direct pupils in finding themselves by exercising their various traits, exploiting their various aptitudes and making possible intelligent choice of any special sort of definite training which may be followed in the senior high school or in higher educational institutions. It is our clumsy, crude, and still more or less vague but yet unmistakable attempt to shunt our educational machinery during this particular three-year period into the field of diagnosing and consciously exercising, by means of more various and more liberally conceived kinds of trainings, the individualities of pupils.¹

Weet. As a practical school man with large vision and keen insight into educational problems, Superintendent Weet saw very early that the eight-four plan did not meet the needs of seventh-, eighth-, and ninth-grade children. The striking elimination which took place in these grades, he felt, was ample evidence of this fact. Accordingly, he welcomed the junior high school, feeling that it would in a large measure do away with the very obvious maladjustment between the pupil and the school. He stressed the following as the all-important purpose of the new institution:

I. *To furnish a suitable educational environment for seventh-, eighth-, and ninth-grade children.* In order to create such an environment, he held that it was necessary (1) to make ample provision for the awakening, fostering, and development of special interests and abilities in pupils; (2) to create a school atmosphere peculiarly adapted to children of this age; and (3) to provide superior teachers.

The greatest weakness of the old plan, Weet felt, lay in the fact that it made little or no provision "for awakening vocational interests and encouraging vocational abilities

¹ *Op. cit.*, pp. 420-421.

before the time when vocational selection " was " actually made." In speaking of this shortly before the introduction of the six-three-three plan in Rochester, New York, he said in part :

We believed this to be a pronounced weakness in our former organization. Both parent and pupil were forced to make some sort of selection of decided vocational importance to the pupil at the completion of this eighth-grade work. In this particular community nearly half of the pupils who remained for the completion of these eight years of work were withdrawing from school. With these the selection was of vital vocational importance, and yet chance rather than intelligence was to determine the outcome. The major part of these eighth-grade graduates who did continue in school, furthermore, were selecting the general or college-preparatory courses of the upper high school; a smaller percentage were selecting the commercial courses, and a still smaller percentage the trade courses for boys and girls of secondary grade. The distribution of our high-school pupils is suggestive on this point. Of the total number 66 per cent are in the general or college preparatory courses, 27 per cent in the commercial courses, and 7 per cent in the trade courses. To the extent that the distribution of high-school pupils might be expected to reflect the vocational activities of the community, one would infer that two thirds of all the working people of Rochester are engaged in professional vocations, while only one third are carrying the business and industrial enterprises of the city. Of course no one would expect nor desire to find only those taking college-preparatory courses of the upper high school who anticipate going to college and later entering upon professional careers. There are many in this course who are there for purposes of general education, and no one will deny that this is a highly defensible purpose for every pupil who has an interest in and the ability to profit by these literary, pure science, and mathematics courses. But how many of those who are actually familiar with our upper high schools would care to defend the proposition that for two thirds of all our grammar-school graduates the general or college-preparatory courses are the most helpful courses which they could possibly take during these four years of the high-school period? . . . To the extent, then, that these

two thirds who are taking general or college-preparatory courses represent those who will not gain results commensurate with the time and energy spent, a continuance of the system is resulting in lifelong injury to pupils quite as effectively as is the learning of any particular trade at too early an age.¹

Regarding the steps which the Rochester school authorities deemed it necessary to take in order to improve this situation, he said:

School authorities in Rochester believed that so long as these broader facilities for evoking the pupils' interests and abilities in the great field of manual arts were not made a reasonably adequate part of their lives before the compulsory education law had been satisfied, the steady withdrawal of such a large percentage of the eighth-grade graduates from this community and the traditional selection of the literary high-school courses on the part of so many others who would gain but meagre profit from such courses would inevitably continue. The only way to guarantee these facilities was to make them a part of the pupil's school work before compulsory attendance had released its hold upon the child. The problem, then, lay in preserving a sensible balance between the one extreme represented by the single-teacher plan of grammar-school organization and the other extreme of premature specialization. This could be done only by insistence that these courses for seventh- and eighth-grade pupils under the junior high school organization should provide, so far as possible, a range of activities sufficiently broad to bring out individual interests and capacities and that they should be emphatically preparatory and pre-vocational.²

Horn. As another practical school man of large vision and keen insight, Superintendent Horn also came to the conclusion very early that our traditional school organization was not adapted to the needs and interests of many

¹ Weet, Herbert S., "Rochester's Junior High Schools: A First Step in Establishing the Six-Three-Three Organization." *Educational Administration and Supervision*, Vol. II, pp. 435-436. (Sept., 1916.)

² *Op. cit.*, p. 437.

children. In the case of the seven-four plan these children were primarily children who belonged in the seventh grade of the elementary school and in the first two grades of high school. He accordingly welcomed the junior high school as the most effective means toward the solution of the problem which this situation presented, and he proceeded to introduce the new institution in Houston, Texas. He stressed the following as its outstanding purpose:

I. *To furnish a suitable educational environment for children of junior high school age.* Such an environment, he pointed out, demanded among other things: (1) provision for greater elasticity in curriculum administration, so that pupils might choose both the type and the amount of their work more in keeping with their interests and abilities; (2) methods of teaching and a discipline and control especially suited to children of this age; (3) superior teachers, including a larger proportion of men; (4) greater emphasis upon pre-vocational activities; and (5) well-equipped buildings especially adapted to junior high school activities.

In an early report dealing with the first two junior high schools established in Houston, Texas, Superintendent Horn said in part:

These schools were intended to meet the needs of that large group of children for whom neither the high school nor the elementary school has previously made adequate provisions, and many of whom have as a result dropped out of school. One of the prominent features in our history during the first school year has been our effort to carry out the junior high school idea and to meet more nearly the needs of children of this group. . . .

The junior high school is not an elementary school. Neither is it a high school. Neither is it a sort of mixture of the two in equal proportions. If it is in reality worthy of the place in our educational economy, it is an institution which is neither an elementary school nor

a high school, but a provision for the needs of those children for which neither of the older institutions made suitable provision. It partakes to some extent of the nature of each, but it is essentially different from either.¹

Cox. Cox, who was instrumental in organizing the Ben Blewett Junior High School of St. Louis, also had a remarkably clear and comprehensive grasp of the needs of children of junior high school age. He accordingly stressed the following as the foremost purpose of the new institution:

I. *To provide a suitable educational environment for children of junior high school age.* To this end he held that it was necessary above all — (1) to democratize the curriculum for the grades in question in order that the needs and interests of all might be met; and (2) to socialize all activities of the school in order that they might reproduce real life situations. In discussing this purpose, Cox said in part:

The junior high school is not fundamentally an organization or administration scheme. It is rather an environment into which all adolescent boys and girls may enter and go to work in earnest on some vital problems²

The fundamental aim of the junior high school is to educate all thirteen- to fifteen-year-old children of the community. It follows that it must receive them all and must retain them, else it cannot educate them; that it must offer each child that kind and quantity of educational opportunity to which he can be stimulated to respond; that it shall offer opportunities not only to master the subject-matter of the curriculum, but that it shall give the young citizens practice in responding to typical experiences for democracy.³

¹ Horn, P. W., "The Junior High School in Houston, Texas." *Elementary School Journal*, Vol. XVI, pp. 91-92. (Oct., 1915)

² *Educational Administration and Supervision*, Vol. III, p. 25.

³ *School Review*, Vol. XXVII, p. 346.

Regarding the more immediate purposes of the junior high school and the means to be employed in realizing them, he expressed himself as follows:

Its immediate purposes are to prevent needless elimination, to furnish educational and vocational guidance, to give pre-vocational opportunities and carry on placement and follow-up work for those the school cannot hold, to see that all pupils master the minimum essentials, to teach them how to study, and how to develop social situations calling for actual responses from the pupils, who then truly learn to do by doing now. . . .

Important devices for accomplishing these aims are the definite periods of supervised study and educational guidance, coöperative work in the shops, the household-arts department, in drawing, music, civics, and science, provision for certain leisure time in school to be improved on reading, dramatics, literary societies, etc. But most important is the provision whereby each pupil may find some work that appeals to him as worth doing now with all his might.¹

Bonser. Bonser looked upon the junior high school movement as above all a movement to democratize secondary education in this country. The American high school, he pointed out, could lay but little claim to democracy as long as it made an appeal to only one out of four children who were eligible to attend. A democratic scheme of secondary education, he maintained, should begin with approximately the twelfth year and should be thoroughly adapted to the needs and interests of all normal boys and girls. The junior high school movement, he felt, was a very definite step in this direction. As the outstanding purpose of the lower or junior division, Bonser stressed the following:

I. *To provide a suitable educational environment for children of the early adolescent age.* The creation of such an environment, he held, necessitated among other things —

¹ *Educational Administration and Supervision*, Vol. III, p. 25.

(1) adaptation to individual differences in interests, capacities, and social needs; (2) vocational orientation; and (3) the pursuit of recognized constant subjects. In discussing these, Bonser expressed himself as follows:

Reasons, both psychological and social, are impressing the need for a more rational definition of both elementary and secondary education. For the greater number of our children, the changes in purpose, content, and method of work seem to belong more fundamentally to the close of the sixth-grade period than to that of the eighth grade. The seventh and eighth grades are maximal for mortality. The close of the sixth year of school, approximately the twelfth of the child's life, marks the beginning of adolescence. Individual differences become more marked than in earlier years. Vocational ambitions are awakened. Rather decided preferences and dislikes, very often based upon tested capacities, appear with compelling force. A relatively small number of the school population have by this time shown themselves strongly capable of academic work. From practical considerations, the time has come when the unified work of the elementary curriculum can no longer be maintained with equal value to all children. That three fourths of all "working paper" children in cities drop out of school, not because of "economic pressure" but because of the attitude of the child and the parents, is an indication of the inappropriateness of much of the usual work of the seventh and eighth grades. . . .

The intrinsic nature and the vocational destiny of most of our population therefore call for differentiation in treatment at from two to six years before they leave school for the vocations. Their intrinsic nature requires this differentiation in that not less than three fourths of them are "concrete idea," or "hand," or "motor" minded rather than "abstract idea" minded. Their vocational destiny requires it in that more than three fourths of them are distributed among vocations in which the usual upper-grade and high-school content gives very little that is of any appreciable worth in terms of practical efficiency.

In practice the "eight and four" plan has done almost nothing to meet really seriously either the facts of individual differences or of

vocational distribution. Not only is the work of the upper grades not differentiated, but even in those high schools with much elective work, the first year or the first and second years are often uniform for all with elective opportunities *in the last two or three years only*. From both the psychological and the social points of view, *it is in early adolescence that differentiation is most fundamentally essential*, and in the later years that prescription with reference to definite ends is most educationally sound. . . .

The differentiation needed from both the psychological and social standpoints does not by any means require group isolation. Rather more than half of the interests and the means of appropriate growth are still common to all children in the seventh, eighth, and ninth school years. It is in those subjects and fields only in which marked differences are evident that differentiation is needed. Individual capacities, inclinations, purposes, and considerations of time will usually determine lines of selection. . . .

Under the stimulus of the differentiated courses with their demands for content from general subjects of substantial and appreciable worth, these general subjects could scarcely fail to become modernized and humanized. We should expect to see geography taught largely in relationship to present-day interests in commerce, industry, the sources of industrial raw materials, markets, travel, and in events of world-wide interest. We should expect to see history re-written in terms of permanent and continuous human interests and problems, selecting its materials from those events that have contributed most to human progress and which most of all help to develop attitudes of mind toward the significance of human conduct. We should expect mathematics to become quite largely a study of the means of solving the vital economic problems of everyday life. We should hope to find elementary science study dwelling primarily upon those problems and principles which have been most fundamental in man's conquest of nature whereby he provides himself with all of his material needs. In short, it seems reasonable to expect that a much more pragmatic selection of materials and emphasis will follow in all of the general subjects because of the more significant meaning of school life to children and teachers through the removal of the isolation of the school from real life contacts.¹

¹ *Educational Administration and Supervision*, Vol. I, pp. 569-575.

Jones. Jones also looked upon the eight-four plan as undemocratic, especially from the standpoint of pupils of secondary-school age. Like Bonser, he regarded the junior high school movement as a most important step toward the democratization of the secondary division of our school system. Regarding the indictments against the eight-four plan, he said :

They may all be summed up in the statement that it is undemocratic — undemocratic to the individual because it does not give to each person an equal opportunity to secure that education and training that will enable him to develop his powers so that he can use them efficiently ; undemocratic to society because it does not train each individual to do the thing he can do best, because it does not provide for a selection of leaders from all ranks of people, and because it provides for the training of only a few leaders in a comparatively narrow field.¹

As major purposes of the junior high school, Jones stressed the following :

I. *To provide for individual differences in needs, interests, and abilities.* Regarding the need of providing for individual differences and the manner of providing for them, he said :

The new plan, whatever it be, must provide better than the old for meeting individual needs, for developing individual interests and aptitudes, and for training each individual to do the thing he can do best, to take the place he should take in modern society. . . .

The mere fact that the seventh, eighth, and ninth grades are grouped together in one school, with separate teachers and distinct life and activities, does not warrant the assumption of the name of junior high school, nor, on the other hand, can we say that those plans should be called junior high school that provide for individual differences without more or less separate organization. In other words, the

¹ *School Review*, Vol. XXVI, pp. III-III2.

junior high school is that plan which aims to provide for individual differences in and through a new organization of the upper grammar grades usually with the first year of high school. . . .

Individual differences, when they appear, may be provided for in a variety of ways :

1. By a wide range of subjects offered.
2. By adaptation of methods.
3. By educational guidance.
 - a) Study of individuals to determine differences in capacity, interests, and needs.
 - b) Opportunity for experimentation in various fields to discover and develop special aptitudes.
 - c) Definite study of adult occupations and vocations.¹

II. *To furnish a suitable educational environment for children in the seventh, eighth, and ninth grades.* Regarding this he said in part :

The contention of the junior high school is that a new grouping of grades, a more or less separate organization, will offer a better medium through which these aims can be realized than the other plans proposed ; that by grouping together children of nearly the same state of physical and mental development we can more easily secure the conditions mentioned than under the old plan.²

Bennett. In his book on the junior high school, Bennett stresses the following as the chief purposes of the new institution :

I. *To prevent elimination in the seventh and eighth, and ninth and tenth grades.* Regarding this he says :

The leakage in the seventh and eighth grades is attributed to several causes, of which dislike for school as taught under the old plan is a principal one. This dislike for school arose from the fact that the pupils were tired of going over and over the common school studies, that they disliked to associate with the little children who had no

¹ *Op. cit.*, pp. 113-114.

² *Op. cit.*, p. 114.

community of interest with them, and that they wanted some real telling work to do, work which was to be found only outside the walls of school. . . . This leakage in the seventh and eighth grades, the junior high schools were organized to check. They plan to reduce the dropping out of school by keeping children interested in school work. The common branches, if taught at all, in these two grades, are to be so effectively changed in nature that the pupils will not recognize them as their old enemies. . . . Other subjects are added—subjects that appeal to the ambition of the young people. The two grades are taken from the grammar-school building and housed in new quarters where the pupils will have only children of their own ages or older children to associate with. The real, telling work of the big outside world is brought into these new schools, and the youngsters have their legitimate ambitions satisfied in school work. . . .

. . . The junior high school is undertaking to prevent this enormous dropping out of pupils in the ninth and tenth grades by bridging the chasm through gradual departmentalization, by introducing new and difficult studies gradually, by spreading subjects over a longer period so that each lesson will be short enough to be prepared under the school roof, by employing sympathetic teachers of boys and girls, by slowly extending the individual responsibility of the youth, by cutting in two the long period required to finish school, so that graduation is not so far in the future, and by giving the adolescent work that will appeal to his interests and ambitions.¹

II. *To provide for vocational and educational guidance.*
In discussing such guidance, Bennett says :

There is undoubtedly great need for careful vocational and educational guidance. The best time for an adviser to study the boy is in the period of early adolescence, just before he enters high school. The best opportunity for such study is when the student is "exposed" to various stimuli. Let a boy take a fair amount of several subjects, and then have the vocational adviser watch carefully the effect. It should place him in a position to diagnose the case with small chance of making a mistake.

¹ *The Junior High School.* Warwick and York, Baltimore, 1919. Pages 7-11.

The junior high school is such an institution as will allow the greatest opportunity for this study. We have the boys or girls at just the right age. There are plenty of short courses which the pupil may take. If he is ever going to have an aptitude or liking for anything, it will surely show in the period from twelve years old to sixteen.¹

III. *To effect economy of time.* Along with many of the earlier leaders in the movement for the reorganization of our public-school system, Bennett was convinced that the period of general education was too long. Since this was obviously in part at least due to waste in the grades which were being welded into the junior high school, Bennett felt that it was one of the outstanding purposes of the new institution to eliminate waste and thereby to shorten the period of general education by at least one year, preferably by completing the work of grades seven to ten inclusive in three years.

IV. *To furnish an educational environment suitable for adolescent boys and girls.* Regarding this he says:

The practical application of this plan [junior high school plan] consists in introducing vocational work into the curriculum to meet the growing demand for real occupational work; departmentalizing instruction for the better development of the individuality of the pupil and for the better teaching of the rich content of secondary subjects; enriching the curriculum by new and mind-broadening subjects, such as the cultural and civic subjects; and by adapting all school life to the needs of adolescence.²

Snedden. As one of the foremost students of American education, Snedden made large contributions to the movement for the reorganization of our public-school system. He took the position that the eight-year elementary school

¹ *Op. cit.*, p. 15.

² *Op. cit.*, p. 20.

is "not rationally defensible," being rather "one of the incidents of the development of American education from below up." Secondary education, he pointed out, should begin at the age of about twelve when "individual differences among varying groups of children" come into bolder relief and demand increasing recognition. Under existing conditions, he felt that the weakest part of our system of education was, for many children at least, "that covering approximately the period from twelve to sixteen years of age — the last two grades of the elementary school and the first two years of the high school."¹

Later Snedden became an active proponent of the six-three-three plan, or, as an alternative, of the six-two-four plan. The purposes of the two- or three-year intermediate or junior high school, he held, were as follows:

I. *To provide a suitable educational environment for children twelve to fourteen or fifteen years of age.* In characterizing this environment, he said:

The school organization which I have in mind as being more effective — namely, the junior high school — should have the following features:

1. All children between twelve and fifteen years of age (including children under twelve ready for the seventh grade, and excluding children under fifteen ready for the regular or senior high school) should be sent to the central junior high school or intermediate school (it should be assumed that a walk of one and one-half, or even two miles is not excessive for this purpose);

2. The course of study in the central school should offer the pupils a large range of elective or optional studies in addition to certain essentials in English language, English literature, American history, community civics, and geography, which should be prescribed for all (for retarded pupils special classes in these subjects should be formed);

¹ *N. E. A. Addresses and Proceedings*, 1908, pp. 752-757.

3. Promotion should as far as practicable be by subject, so that a retarded pupil, for example, in the fourth grade in arithmetic, may, if qualified, enter seventh-grade geography, and a boy backward in history may nevertheless take eighth-grade industrial arts (manual training) if qualified;

4. Teaching in the junior high school is expected to be departmentally organized by subjects, or preferably along lines of the Gary plan, by groups of related subjects, and it is expected that this organization will produce a demand for specially qualified teachers;

5. If the state is willing to pay the price, a certain proportion of men teachers should be assigned to departmental positions, not primarily because they are necessarily better teachers than women, but because it is desirable to introduce, in boys' classes at any rate, the influence of masculine personality.¹

II. *To provide for individual differences, psychological and social.* In characterizing these differences and the steps to be taken in meeting them, Snedden expressed himself as follows:

The conditions are summed up in the two words "increasing variability." Uniform programs of education, uniform teaching methods, and non-specialized teachers presuppose groups of people of substantially uniform characteristics. But all recent inquiries tend to bring into relief facts as to the increasing unlikeness of children beyond twelve years of age. We recognize them as differing moderately as regards height, weight, and bodily strength; materially as regards abilities in such studies as literature, vernacular language, and history; and very greatly as regards abilities and interests in music, plastic and graphic art, abstract mathematics, alien language, and manual construction work. . . .

Besides the psychological "conditions" of the individuals composing our school classes, what are their social "needs" that justify the proposed reorganization of upper-grade work? The keynote to these needs will be found in the words "progressively increasing differentiation." Modern civilized life is like modern industry or modern

¹ *Educational Administration and Supervision*, Vol. II, pp. 425-427.

army organization. Functions are being increasingly differentiated, and activities and interests specialized according to all kinds of capacities and opportunities. . . .

Hence the desirability of partial group differentiation of pupils even as early as twelve years of age. Their needs include fitting for those special group activities in which they can most profitably serve themselves and society. As to some of these children it is certain that their opportunities for school education will close forever at or near fourteen years of age. We may not always know the particular individuals of whom this is true — although a shrewd social diagnostician, knowing the facts as to the home conditions, school standing in studies, intellectual interests, general moral behavior, and physical conditions of one hundred children at twelve years of age, could, I think, guess right as to 90 per cent of them. But even if we do not know the future as regards particular individuals, we do know it in large measure of collected groups, in the statistical sense — we know of probable numerical rates and percentages; hence any refusal on our part to provide opportunities into which individuals will fit as well as may be on the initiative of themselves or their parents, with perhaps our advice, is wasteful, inefficient, and essentially undemocratic.¹

III. *To provide opportunities for occupational exploration.* Although a strong proponent of differentiated activities and practical activities beginning with the age of about twelve, Snedden did not believe that the junior high school should look toward definite vocational training. On the contrary, he felt that it should aim primarily at exploration and self-discovery. In discussing the new institution in the light of this function, he said:

But in the junior high school large opportunities should be given for practical arts training, which, while not vocational in its outcome, may help towards vocation-finding, and will certainly give insight into the ideals and social significance of occupational life, if properly directed.

¹ *Op. cit.*, pp. 430-431.

To be of real service, however, practical arts education (industrial arts, agricultural arts, household arts, nautical arts, and commercial arts are included under this head) must be diversified according to the fundamental interests of children; and the spirit in which each type of work is to be approached should be that of the amateur. Courses should be very flexible. A pupil entering printing for the first time, for example, should have the option of several simple introductory projects; after he has given reasonable attention to any one he should, if he wishes, be permitted to take up projects in a totally unrelated field — e.g., gardening.¹

Inglis. Inglis viewed the junior high school movement as at base an attempt on our part to correct the defects of the eight-four plan. He stressed the following as the outstanding purposes of the new institution:

I. *To provide for a "better coördination and articulation between elementary and secondary education" and for a "gradual transition from earlier to later grades in the school system."* Regarding the steps to be taken toward this end, he said:

This demands: (a) the close relationing of each successive grade with the preceding grade as far as teaching material and teaching method are concerned; (b) gradual change from the one-teacher plan of the elementary school to the many-teacher plan of the secondary school; (c) gradual change from largely supervised work in the earlier grades to more independent work involving initiative, self-reliance, and responsibility in the later grades; (d) the gradual introduction of new subject-matter and its relationing to old subject-matter; (e) the gradual introduction of "election"; (f) gradual change in teaching methods and in methods of treating children.²

II. *To provide for individual differences, both psychological and social.* In speaking of the essential steps toward this end, he said:

¹ *Op. cit.*, pp. 431-432.

² Inglis, Alexander, *Principles of Secondary Education*, p. 294.

This demands: (a) the earlier introduction of some differentiated studies for different groups of pupils; (b) promotion of pupils by subject rather than by grades, (c) increased flexibility in the administration of education in the intermediate grades; (d) provision for the introduction of some forms of instruction which may give pupils an opportunity to explore and test out their capacities, aptitudes, and interests; (e) provision for some forms of educational diagnosis and direction; (f) recognition of the needs of those leaving school early; (g) provision for economy of time in the case of brighter pupils.¹

III. *To do away as far as possible with retardation and elimination.* As essential steps toward this end, he stressed the following:

This involves: (a) reorganization of the subject-matter of the present seventh and eighth grades so as to provide a more contentful and effective form of education for those who must leave school early; (b) the introduction of some pre-vocational education for those pupils; (c) provision for the reduction of retardation and elimination by improved methods of controlling progress through the grades; (d) the encouragement of larger numbers of pupils to continue their education into the senior high school.²

IV. *To reorganize "teaching materials and teaching methods."* Regarding this he said:

The belief is growing stronger that subjects of study in the junior high school should be organized primarily with reference to the capacities and needs of the pupils and with reference to their activities in life after the school, and not primarily in terms of the logical organization demanded by the subject considered as a logically arranged field of knowledge. The study of subjects as logically organized units or fields of knowledge should be reserved for the work in the senior high school.³

Judd. As one of the most vigorous and farsighted champions of the junior high school movement, Judd ex-

¹ *Op. cit.*, pp. 293-294.

² *Op. cit.*, p. 294.

³ *Op. cit.*, p. 295.

pressed himself repeatedly in no uncertain terms regarding the functions and purposes of the new institution. He placed particular emphasis upon the following:

I. *To democratize the school system by bridging the gap between the elementary and the high school.* Regarding this gap between the elementary and the high school, a gap which has kept our school system from becoming a functional democratic unit, he says in part:

It is known to everyone who has passed through our educational system that the elementary school stops and the high school begins, sometimes with a noticeable jolt to the student. The break is our inheritance from an undemocratic past. It represents the degree of failure to assimilate the lower and higher schools into a single system.¹

In discussing this break between the elementary and the high school at some length, Judd points out that it manifests itself in a variety of ways, "in externals and in matters of internal organization." Thus, the two schools are usually housed and administered separately; pupils are treated very differently, high-school pupils being accorded much greater freedom than elementary-school pupils; the teaching and supervisory staffs represent a striking contrast, those of the high school being all too often specialists with little or no concern in the affairs of the elementary school; finally, the methods of teaching and the subject-matter are very different in the two schools.²

In speaking of the junior high schools as a means of bridging this gap, he says:

The junior high school has grown up in democratic America as the last chapter in the history of the struggle against the medieval dual system. The junior high school is the device which modern society

¹ Judd, Charles H., *The Evolution of a Democratic School System*. Houghton Mifflin Company. Page 60.

² Consult *op. cit.*, pp. 67-72.

has developed in its effort to throw off the limitations of an artificial eight-year, rudimentary, vernacular school. The junior high school is a device to heal the breach between the elementary school and the high school.¹

And elsewhere he says :

Sometimes it has been said by those who oppose the intermediate school that the break between the sixth grade and the seventh grade will be widened by this new form of organization. They are saying, also, that the break between the ninth grade and the tenth grade is a menace to the fuller development of the child's education. The answer to these criticisms lies in the fact that the whole motive of this organization is to create a continuity where heretofore there has been a disjointed and wastefully duplicating system. The seventh grade is to recognize the individual child's needs, and is to give him such a course as is suited to his adolescent experience. In doing this it will effect a change in methods of operation just at the point where the child himself is undergoing a change. The child will reach out and meet the change in school organization which is provided for him. To delay this change until two years after the child is prepared for it, as we do in the eight-year school, jeopardized the whole relation of the school and the pupil. To make the change at the time in the child's life when he is ready for it, and when the change will be congenial to his needs and intellectual demands, is to economize his life and energy in the largest sense of the word. We avoid a break by moving parallel to the child's own motion, not crossing him obliquely in the path of development. In exactly the same way, if we change the first year of the high school so as to make it fit the child's needs, we will effect economy by removing those obstacles to the natural progress of the pupil which now exist in the first year of high school.²

II. *To provide a suitable educational environment for the early adolescent.* This purpose is stressed above. Elsewhere Judd says :

There is one and only one solution of this problem — that is, a reorganization of the schools in the spirit of a more complete recogni-

¹ *Op. cit.*, p. 88.

² *School Review*, Vol. XXIV, p. 238.

tion that the seventh and eighth grades are a part of the adolescent school.¹

And again :

Twelve years of age is the crucial period, physically and morally and intellectually. We cannot do the work of training adolescent youth by waiting until the period is well advanced. In the first place, under our present system many of these youths will escape from the control and guidance of the educational authorities. In any case we should recognize the fact that intellectually, as well as physically, the period of rapid growth is one of maturing powers which have been gradually developing in an earlier period. The impatience of boys in the seventh and eighth grades with a mere continuance of the elementary curriculum ought long ago to have drawn the attention of teachers to the fact that a new mode of administration is required for these years; and new subject-matter is required if instruction is to serve the purpose of bridging over the education of the primary grades and making it available as a preparation for entrance into the adolescent mode of thought and action.²

III. *To provide for individual differences.* Regarding this Judd says in part :

Another product of the science of human nature is the principle of individual differences. The fallacy of believing that all pupils are exactly alike was the fallacy of a generation ago. The study of human nature and the needs of society have forced upon us a new conviction. We now realize that an individual, to be a productive member of society, must play some part other than that which is played by his fellows. In our schools we must provide preparation for the diversified duties of democratic society by giving full recognition to individual capacities and individual training. Children in the lower grades exhibit personal characteristics which deserve attention ; but in those early days, when the most fundamental types of learning are being worked out, the common traits of human nature are in preponderance.

¹ *School Review*, Vol. XXIII, p. 32.

² Judd, Charles H., *The Psychology of High-School Subjects*. Ginn and Company, 1915. Page 499.

By the time the child has reached the fifth and sixth grades his personality begins to express itself in various ways. Having cultivated acquaintance with the fundamentals of knowledge, he now begins to make applications of knowledge to his own individual life, and the period of adolescence finds him ready to assume personal responsibilities and make personal decisions with regard to intellectual and moral matters. Whether we like it or not, the child in the seventh grade is growing up into an individual. Whether we like it or not, his tastes and outlook will begin to mark themselves off sharply from the tastes and outlooks of other members of the class. That school alone is intelligent in its management of seventh-grade children which recognizes the fundamental principle of individual differences.¹

IV. *To effect genuine economy in education.* In discussing this, Judd says in part:

Another great virtue of the junior high school is that it puts a stop to the waste of time and energy which has resulted from the inadequate organization of our schools. Waste has come from three causes. First, pupils have been held back in the upper grades in order to conform to the tradition that elementary education is vernacular and rudimentary. Second, pupils have been confused because of the great change experienced in passing from elementary classes to high-school classes. Third, many pupils have dropped out of school or failed to work with enthusiasm because the subjects offered to them were artificial and unsuited to their needs.²

After calling attention to the ever-increasing current demand for economy, he continues:

The junior high school comes as one answer to this demand for economy. This institution is offered as a better school, not a cheaper school. In point of actual cost the junior high school is usually more expensive than the seventh, eighth, and ninth grades because it offers a richer course of study and especially because it keeps children in school. But in its economy of human beings, the junior high school is far in advance of the old-fashioned school.

¹ *School Review*, Vol. XXIV, pp. 253-254.

² *The Evolution of a Democratic School System*, pp. 101-102.

Furthermore, it is an economical school in that it brings its pupils to advanced stages of their training at an earlier date. The boy who is going into commerce can here study the subjects which will fit him for his career earlier than he could in any other organization of the curriculum. The boy who is going into a profession gets an earlier start.¹

Van Denburg. Van Denburg was also keenly aware of this gap or break between the elementary and the high school. In his recent book ² he stresses the fact that our failure to articulate these two divisions of our school system properly has resulted in serious "loss of power," and points out that they should be "united by a flexible coupling or universal joint rather than by a rigid shaft." This coupling, he feels, should be supplied by the junior high school. Specifically, he points to the following defects in the old eight-four organization :

1. The elementary school confines itself too largely to the mastery of the tools of learning, ignoring almost entirely their probable use after graduation.

2. The relatively uniform and prescribed curriculum of the old elementary school prevents pupils from securing a glimpse of the fields that lie ahead and from discovering their peculiar interests and aptitudes — so much so, indeed, that the choice of high-school courses must be made in blind and haphazard fashion.

3. There is too much difference in the treatment which pupils receive in these two schools. In speaking of this, Van Denburg says :

The pupil whose attention has been held for years to repetition and review, who has been helped, prodded, cajoled, and threatened into

¹ *Op. cit.*, pp. 103-104.

² Van Denburg, J. K., *The Junior High School Idea*. Henry Holt and Company, 1922.

memorizing bits of information — not infrequently requiring two years to do the work of one — this pupil now enters high school where he is expected to attack new work largely on his own initiative and impelled, not so much by interest, as by a sense of duty.¹

4. The break between elementary and high-school subjects is too abrupt.

These defects, he feels, may be corrected most effectively through the creation of a new institution, the junior high school, an institution which has no traditions to impede its progress. As outstanding purposes of the new institution, he stresses the following :

I. *To provide a course of study which will fit those who "follow it to do better the work in the school, or out, that lies just ahead," and which will have as "one of its chief aims training its pupils to find their own aptitudes, talents, and preferences for further work and study."* Regarding this he says :

The ideal junior high school is therefore a finding and a sorting school where pupils may, through actual experience, be led to make a more rational selection of their senior high school work, or their occupation in the world of industry, than would be otherwise possible. The claims for recognition of such a school, could it be brought into existence, need no further defence.²

II. *To provide methods of teaching which will train pupils to rely upon "themselves in acquiring new knowledge."*

III. *To provide a curriculum organization which will enable pupils to pass gradually from elementary to secondary subject-matter.* In discussing this he says :

In each general introductory subject we will begin at once, in the seventh grade, the work of the old ninth school year (first high-school year), taking this new work gradually. With it we will combine some parts of the old seventh and eighth school years, adding such entirely new work as may be advisable. We have already dismissed the idea

¹ *Op. cit.*, p. 16.

² *Op. cit.*, p. 16.

of continuing the old-style seventh- and eighth-year (elementary-school) work and then adding a ninth year of straight high-school work. Those few school systems that have tried to found their so-called junior high schools on this latter plan have met with small success. Those that believe a junior high school can be formed by merely grouping the last two years of the elementary school and the first year of the high school in one building under one principalship show that they have absolutely no conception of the junior high school idea. *No mere change in building or in supervision can work an improvement if the old seventh-, eighth-, and ninth-year plans of work continue unchanged.*¹

Briggs. Several years ago Briggs undertook the task of formulating a tentative definition of the junior high school on the basis of the composite opinion of a considerable number of representative educators who had shown marked interest in the new type of institution. To this end all published definitions were collated and the items submitted to the educators in question with the request that they indicate which they considered essential and which highly desirable. This questionnaire was so comprehensive and the results throw so much light upon the purposes of the junior high school that we reproduce the results in the following table. The percentages under "Desirable" in this table include those under "Essential."

The junior high school is:

No. OF ITEM	ITEM	PER CENT CONSIDERING ITEM	
		Essential	Desirable
1	A distinct educational unit	54.1	68.9
2	separated in organization from the elementary grades	62 3	86.9
3	separated in organization from the senior high school	41.0	85.3

¹ *Op. cit.*, p. 68.

No. of ITEM	ITEM	PER CENT CONSIDERING ITEM	
		Essential	Desirable
	Combining the school years		
4	7-8.....	9.8	19.7
5	7-9.....	41.0	95.1
6	7-10.....	11.5	31.2
7	—.....	4.9	9.8
8	Suitable for all pupils approximately 12-16 years of age.....	72.1	90.1
	Seeking		
9	to retain pupils longer in school	72.1	95.1
10	to provide curricula of a vocational character for pupils who will assuredly leave school early	59.0	90.1
11	to provide a more gradual transition to higher schools	78.7	93.5
12	to accelerate in varying degrees all pupils who will continue in school	67.2	96.7
13	to explore pupils' interests.	80.3	96.7
14	to explore pupils' aptitudes.....	83.6	98.4
15	to explore pupils' capacities.....	80.3	95.1
	to explore for the pupil by means of mate- rial in itself worth while		
16	possibilities in the major academic subjects	59.0	91.8
17	possibilities in several industries of local im- portance.....	49.2	88.5
	Providing for individual differences		
18	by differentiated curricula.	77.0	96.7
19	gradually increasing in differentiation	73.8	95.1
20	fully differentiated as early as the future of pupils is known with reasonable definite- ness.....	24.6	57.4
	This approves in the junior high school		
21	real vocational training for pupils who with their parents' consent decided to enter a trade about the age of sixteen.....	16.4	59.0
22	earlier direct preparation for higher educa- tion for pupils likely to continue school.	41.0	82.0
23	by the organization of groups homogeneous in ability.....	27.9	96.1

No. OF ITEM	ITEM	PER CENT CONSIDERING ITEM	
		Essential	Desirable
24	Using methods of teaching between those of the elementary school and those of the high school.	72.1	85.3
25	including many projects	59.0	90.1
26	encouraging initiative on the part of pupils	75.4	90.1
27	Using departmental teaching partial	42.6	50.8
28	full	29.5	52.5
29	a gradually increasing amount	45.9	65.6
30	Using promotion by subject	73.8	93.5
31	Providing curricula enriched beyond those commonly found for pupils 12-16 years of age	85.3	96.8
32	flexible to suit individual needs	83.6	98.4
33	Reorganizing courses of study so as to eliminate material justified for the most part only by traditional practice	80.3	98.4
34	only by the logical organization of subject-matter	70.5	93.5
35	only by deferred values so as to meet assured	29.5	63.9
36	immediate needs	50.8	78.7
37	future needs	47.5	80.3
38	Providing systematic guidance for each pupil educational.	65.6	98.4
39	personal	68.9	96.7
40	vocational	57.4	98.4
41	Emphasizing extra-curriculum activities of various kinds	50.8	95.1
42	Granting an increased amount of opportunity to pupils for participation in the social administration of the school	52.4	90.1
43	Granting administration of discipline by some form of self-government	24.6	78.7
44	by advisory councils ¹	26.2	85.2

¹ Briggs, Thomas H., "What Is a Junior High School?" *Educational Administration and Supervision*, Vol. V, pp. 284-286 (Sept., 1919, pp. 283-301).

The purposes of the junior high school which stood foremost in the minds of this group of educators, as revealed by their replies to the above questionnaire, may be briefly summarized as follows:

I. *To provide a suitable educational environment for children twelve to sixteen years of age.* Such an environment includes a separate organization, enriched and reorganized curricula and courses of study, and methods of teaching peculiarly fitted to children of this age. (1-3, 8, 24, 25, 31, 33, 34.)

II. *To explore pupils' interests, aptitudes, and capacities.* (13-15.)

III. *To provide for individual differences.* This demands among other things flexible curriculum organization, opportunities for varying rates of progress, promotion by subject, and educational and vocational guidance. (12, 18, 19, 30, 32, 38-40.)

IV. *To provide for a gradual transition to higher schools.* (11.)

V. *To retain pupils in school longer.* This necessitates the democratization of educational opportunities. (9.)

VI. *To provide vocational curricula for pupils who must assuredly leave school early.* (10.)

VII. *To enable pupils to explore by means of materials in themselves worth while the major academic subjects and certain industries.* (16, 17.)

VIII. *To provide earlier direct preparation for the higher education of pupils likely to continue in school.* (22.)

In his excellent chapter on "Curricula and Courses of Study,"¹ Briggs stresses the following purposes of an intermediate or junior high school:

¹ Briggs, Thomas H., *The Junior High School*. Houghton Mifflin Company. Chap. VI.

I. "*To continue, in so far as it may seem wise and possible, and in a gradually decreasing degree, common integrating education.*" He says in part:

It is probable that even in the best schools there will remain after the sixth grade many details which, because of the generous conception as to what all citizens should know or because of the immaturity of the pupils, have not been taught. These, when presented in the seventh, eighth, or even more advanced grades, continue the integrating effect of education and also result in the desirable gradual change toward complete differentiation.¹

II. "*To ascertain and reasonably to satisfy pupils' important immediate and assured future needs.*" Regarding this he says:

Many of these, especially the immediate needs, are common to all early adolescents, and so their satisfaction also contributes to the first purpose. Many others, both the immediate and especially the future, are because of individual differences of various kinds not common. It is assumed that such differences as are undesirable and as can be removed at a justifiable cost to society will be eradicated. But there remain the other differences—in mental capacities, in age, in economic status, and in family traditions toward education. Because it is beyond the power of the school to affect these latter differences, it is necessary to provide differentiated training, and this can wisely be done only after a serious effort has been made to ascertain what differences, especially in interests, aptitudes, and capacities, exist and necessitate different directions or training.²

III. "*To explore by means of materials in themselves worth while the interests, aptitudes, and capacities of pupils.*" In speaking of this he says:

As there are no means of knowing with any degree of accuracy the differences of children in interests, aptitudes, and capacities at the end of the elementary-school period, it is argued that it is an essential

¹ *Op. cit.*, p. 162.

² *Op. cit.*, pp. 163-164.

function of the intermediate school to ascertain what these differences are, so that advanced schooling may offer training adapted to them. . . .

This purpose necessitates a much wider variety of offerings, primarily in "general" courses, than the traditional program of studies provides, and it proposes to begin its study of differences earlier and more deliberately. More than this, it demands that the material for exploration so far as possible be justified for other ends of education. . . .

The intermediate school courses should explore the interests, aptitudes, and capacities of pupils in all the more important fields of learning, which include industrial activities.¹

IV. "*To reveal to pupils, by materials otherwise justifiable, the possibilities in the major fields of learning.*" Regarding this he says in part:

The intermediate school proposes to open up to pupils somewhat earlier the possibilities in higher education, so that each pupil may intelligently elect those subjects which attract his interests, for which he has aptitudes and abilities, and which, while promising to satisfy clearly perceived needs, stimulate his ambitions.²

V. "*To start each pupil on the career which, as a result of the exploratory courses, he, his parents, and the school are convinced is most likely to be of profit to him and to the state.*"³

Koos. Koos recently undertook an elaborate canvass of the educational literature concerning itself with the junior high school in order to determine the purposes which are most commonly ascribed to the new institution. He says:

For purposes of the canvass the literature examined was divided into two classes: (1) public school documents, such as city school reports, pamphlets issued by the school authorities in description of junior high schools established in their communities, and other similar

¹ *Op. cit.*, pp. 165-168.

² *Op. cit.*, p. 169.

³ *Op. cit.*, pp. 175-176.

materials, usually prepared by the superintendent or principal; and (2) statements of the aims, advantages, or functions of the junior high schools by other educational leaders. The latter group of statements appeared in articles or editorials in educational periodicals, educational books, or reports of school surveys.¹

The purposes, or peculiar functions as Koos designates them, which appeared in these two types of literature were carefully tabulated and arranged as far as possible in the order of the frequency of their occurrence. Those which occur with sufficient frequency to be significant are shown in the following table:

FREQUENCY OF APPEARANCE OF PECULIAR FUNCTIONS OF THE JUNIOR HIGH SCHOOL ²

PECULIAR FUNCTIONS OF THE JUNIOR HIGH SCHOOL	IN STATEMENTS IN SCHOOL DOCUMENTS		IN STATEMENTS BY EDUCATIONAL LEADERS	
	Number	Per Cent	Number	Per Cent
I. Realizing a democratic school system through				
1. Retention of pupils.....	22	73.3	18	90.0
2. Economy of time	19	63.3	17	85.0
3. Recognition of individual differences.....	16	53.3	19	95.0
4. Exploration for guidance. . .	12	40.0	15	75.0
5. Vocational education . . .	12	40.0	14	70.0
II. Recognizing the nature of the child.....	11	36.7	11	55.0
III. Providing conditions for better teaching....	14	46.7	17	85.0
IV. Securing better scholarship . .	6	20.0	7	35.0
V. Improving the disciplinary situation and socializing opportunities.....	14	46.7	14	70.0

¹ Koos, Leonard V., *The Junior High School*. Harcourt, Brace, and Howe, 1920. Chap. II.

² *Op. cit.* Adapted from Table I, p. 18.

After a critical discussion of the results brought out by this canvass, Koos summarizes his own conclusions in part as follows :

This examination seems to the writer to lead to the conclusion — to be held only until better light is available for reëvaluation — that the peculiar functions which may be regarded as legitimate are those named in our table and figure which are seen to have been more frequently proposed than others, specifically those appearing under I-V.

Although there is an absence of unquestionable evidence that the junior high schools are at present holding pupils better than does the conventional school organization, there is basis for confidence that (1) thoroughgoing reorganization will remove many of the causes of elimination that lie within and even to some extent those that lie without the school. Through shortening the period now devoted to the tool subjects by elimination of nonessentials, and their more effective presentation by methods scientifically selected, through utilizing the saving thus made for subjects having greater functional possibilities, and through moving each pupil at a rate appropriate to him, (2) the junior high school may be expected to effect a genuine and appreciable economy of time. It is also much better adapted than is the traditional organization to (3) recognition of and (4) exploration for variation in abilities and interests of pupils. The accomplishment of the purpose of exploration for guidance through giving the pupil a wide array of vocational experiences will constitute at least (5) a beginning of vocational education for those whose school careers must be interrupted before or near the close of the junior high school period. To be just to certain groups of pupils, especially the average, it may be necessary and advisable in some localities to supplement this meager beginning by special vocational training to be provided within this period. By achieving these five peculiar purposes long strides will be taken toward the performance of that larger function, democratizing the American public school system. The junior high school can also (6) better recognize than can the traditional plan the important changes taking place in the child's nature at adolescence. It will (7) provide the conditions allowing for improvement of teaching. As a consequence of this better teaching and other

influences for motivation, an improved application of the pupil will result, which (8) will bring for the individual, if not for the school, a higher standard of scholarship. This superior application, joined with other agencies, (9) will bring a better disciplinary situation and, with still other reforms which accompany the junior high school, enlarge the socializing opportunities of the school.

Consideration of the working list of peculiar functions of the junior high school should not be concluded without the admission that they are not discrete purposes, but are, instead, much intervolved. Realizing one of them will often mean partially realizing several others.¹

SUMMARY OF PURPOSES ADVANCED BY REPRESENTATIVE LEADERS IN THE JUNIOR HIGH SCHOOL MOVEMENT

After reviewing at some length the purposes of the junior high school as advanced by representative leaders in the movement, we may briefly summarize those which stand out most prominently. Arranged in the order of the emphasis accorded them, they are approximately as follows :

I. *To provide a suitable educational environment for children approximately twelve to sixteen years of age.* This purpose clearly stands foremost in the minds of junior high school leaders. All stress it, either directly or by implication. All are agreed that the educational environment which the eight-four plan supplies is inadequate and unsuitable from the standpoint of the needs and interests of the children in question—children variously designated as seventh-, eighth-, and ninth-grade children, as children of junior high school age, as early adolescents, and as children twelve to sixteen years of age. All are convinced, moreover, that an educational environment which is suitable for children of this age may be provided more advan-

¹ *Op. cit.*, pp. 81-83.

tageously through a new institution — an institution with a distinct atmosphere, an enriched and flexible curriculum, new methods of teaching and control, superior teachers, and an improved material plant — than through reform within the old.

II. *To explore the interests, abilities, and aptitudes of children of junior high school age.* In some form or other this purpose, too, is advanced by practically all representative leaders in the junior high school movement. They stress the fact that individual traits come into greater prominence with the onset and progress of physiological maturation, and that differentiated activities become increasingly essential, on the strength of both psychological and social considerations, as children advance through the junior high school grades. The old eight-four plan, with its one prescribed curriculum for the seventh and eighth grades and its differentiated curricula beginning with the ninth grade, they point out, not only makes no provision for the discovery and direction of individual traits but actually tends to preclude such steps in a rather effectual manner. The new institution must, therefore, in their estimation, make ample provision for the progressive discovery and the experimental direction of individual interests, aptitudes, and abilities through such agencies as enriched and flexible curricula, general and exploratory courses, individual and social diagnoses, and educational and occupational orientation and guidance.

III. *To explore the major fields of human endeavor.* This purpose, it will be observed, is intimately related to the preceding one. As such it is stressed, either directly or by implication, by most representative leaders in the junior high school movement. They point to the fact that the

nascent social interests of children ordinarily found in the seventh, eighth, and ninth grades demand a general survey of the major fields of human endeavor, both academic and occupational, rather than intensive work within relatively isolated departments of these fields. These general surveys, they point out further, are quite indispensable in the exploration of individual interests, aptitudes, and abilities. Indeed, without exploratory activities of this type genuine educational and occupational orientation is, in their estimation, out of question. The new institution must accordingly make ample provision for exploratory and survey activities within the major fields of human endeavor.

IV. *To provide for individual differences.* Practically all representative leaders in the junior high school movement stress, directly or by implication, the necessity of adapting the work of the school to individual differences, both psychological and social. Almost without exception they emphasize the fact that these differences come into increased prominence during the junior high school age, the psychological in part at least because of the onset and progress of physiological maturation, and the social in part at least because economic conditions begin to assert themselves as an increasingly dominant influence in determining the individual's probable educational and occupational career. They point to the fact that the eight-four plan has utterly failed at this point, and state in no uncertain terms that the junior high school must meet the issue squarely by making ample provision for richer and more democratic offerings, for adequate curriculum differentiation, and for flexibility in methods of promotion.

V. *To continue common integrating education.* Representative leaders in the junior high school movement are

quite generally agreed, further, although they do not always explicitly state so, that the new institution must continue common integrating education. More than that, they insist that it must do this far more effectively than the corresponding grades of the eight-four plan have ever done it. These grades, although the seventh and eighth at least have been given over almost entirely to a common curriculum, have nevertheless, in their estimation, failed to provide the integrating education which is essential for citizenship in a democracy and for refined and wholesome social intercourse, largely because of their adherence to an unsocialized content and a stereotyped procedure. These glaring defects the junior high school must, in the judgment of these leaders, seek to correct. To this end it must make ample provision for genuine integrating education, partly through continued socialized training in certain fundamentals, and partly through common socialized survey and exploratory activities in the major academic and occupational fields.

VI. *To provide for a more gradual transition from elementary to secondary education.* It will be recalled that the necessity of providing a more gradual transition from elementary to secondary education was one of the earliest arguments advanced in favor of a reorganization of our school system. The early advocates of the six-six plan almost without exception pointed to the gap or break — in subject-matter, methods of teaching, and social control — between the elementary and the secondary school, and urged the necessity of bridging it. They felt that the adoption of the six-six plan would constitute an important step in this direction, since it would prepare the way for a thoroughgoing reorganization of the work of the seventh, eighth, and ninth grades.

Since the junior high school came in time to embrace these transition grades, it was to be expected that its proponents should stress provision for a more gradual transition from elementary to secondary education as one of its outstanding purposes. And they do so almost without exception, either directly or by implication.

VII. *To democratize the school system.* In large part, as will appear subsequently, this purpose is synonymous with the above. It is stressed most often by those who are most conversant with the historical and comparative background of our public school system. They point out that our school system is supposed to represent, in contrast with the aristocratic and dual systems of most countries, a democratic ladder scheme of education, a scheme making it possible for every child of normal intelligence to begin at the bottom and to continue with profit as far as his ambition and circumstances permit. That this is as yet far from true, they point out further, is evidenced by the fact that a large proportion of our children fail to make normal progress and that the majority leave school before their legitimate needs have been met. In part at least they account for this defect in our educational system by the fact that our elementary and secondary schools, after evolving more or less independently, have not been properly balanced and articulated, and so do not constitute an organic and functional whole. Uniform elementary work, they hold, continues too long, and differentiated secondary work begins too abruptly and extends over too brief an interval. In consequence, the upper elementary grades and the first grade of the high school constitute a stumblingblock for a large proportion of our children. Until this has been removed, so that children may pass gradually from the elementary to

the secondary régime, our school system can lay but little claim to genuine democracy.

Nor will this step alone completely democratize our school system in the estimation of these leaders. In order to achieve this end fully, they point out further, it will be necessary to provide, beginning with these transition grades, enriched programs of study, adequate curriculum differentiation, flexible methods of promotion, and ample opportunities for socialization, so that each child may as far as possible enter upon the type of work which he needs most.

VIII. *To effect economy of time in education.* The urgent necessity of economy of time in education was, it will be recalled, one of the earliest arguments advanced in favor of a reorganization of our school system on the six-six basis. The eight-four plan was shown to entail serious loss of time and efficiency, when compared with school systems organized on a different basis. Although there was a disposition at the outset to view this loss of time primarily from the standpoint of the select few who were destined to continue their education through our secondary and higher institutions, the more farsighted soon began to stress the fact that the loss, since it centered largely in the seventh and eighth grades, was equally serious for those who were compelled to leave school at the close of the elementary period. The six-six plan, it was argued, would prepare the way for a thoroughgoing reorganization of the work of the upper grades of the elementary school, so that they would in time come to represent a genuine advance for all pupils, irrespective of their educational future.

Representative leaders in the junior high school movement, once the six-three-three plan began to come into favor, generally accepted bringing about economy of time in

education as one of the basic purposes of the new institution. As a rule, however, they were disposed to qualify this acceptance by stating that economy of time implied in their estimation greater achievement in the course of the elementary and secondary periods rather than an actual shortening of the time-allotment for which our school system calls. They admit quite freely that there is waste all along the line, and waste especially in the seventh, eighth, and ninth grades, and that this must be eliminated as far as possible. The junior high school, they hold, must face this situation boldly, in so far as the waste falls under its jurisdiction, and must make sure that the activities which it embraces shall become genuinely functional. The more farsighted realize, of course, that greater achievement must ultimately result in a shortening of the time now allotted to the periods which are intrinsically elementary and secondary.

IX. *To provide for socialization.* A large proportion of representative junior high school leaders stress the fact, either directly or by implication, that it is one of the basic purposes of the junior high school to provide ample opportunities for socialization. They point out that the eight-four plan has fallen seriously short in this respect—in the seventh and eighth grades largely because the number of pupils in a given building has usually been too small to support an adequate program of extra-curricular activities; and in the case of the ninth grade largely because pupils usually found themselves too suddenly in an environment so radically different from that represented by the seventh and eighth grades that it tended to confuse rather than to socialize them. The junior high school representing, as it usually does, relatively large groups of pupils who have

much in common, constitutes, in their estimation, an ideal situation for socialization on a large scale. While it is generally recognized that socialized curricular activities are an important factor in socialization, most leaders emphasize the necessity of an extensive and well-directed program of extra-curricular activities for genuine socialization.

X. *To provide vocational training for those who must leave school early.* As indicated earlier, junior high school leaders are thoroughly agreed that the junior high school must help the individual to find himself, and that it should as far as possible start him on his career. However, it should be borne in mind that this implies pre-vocational rather than vocational training. Regarding the extent to which the junior high school should actually provide vocational training for those who must leave school either during or at the close of the period, there is much less unanimity of agreement. The great majority of farsighted leaders are, however, clearly looking forward to the time when there will be no occasion for strictly vocational training during the junior high school period — the not far-distant time, in other words, when our school laws will require all individuals to continue their education in regular or part-time schools through the senior high school period, in the course of which vocational training may be undertaken more advantageously. Meanwhile, there are those who feel that the exigencies of the present situation cannot be ignored, and who maintain that it is for the time being clearly one of the purposes of the junior high school to furnish definite vocational training for those who must leave school early.

THE MAJOR PURPOSES OF THE JUNIOR HIGH SCHOOL

The outstanding purposes of the junior high school, as enumerated above, represent, we believe, in a very large measure the collective judgment of the foremost leaders in the junior high school movement. As such we may well accept them for the time being as the major purposes of the new institution. The statement as it appears above represents, however, as the reader will observe, considerable overlapping. It is desirable, therefore, that we reorganize it somewhat before we accept it as a working basis. This done, it will appear approximately as follows:

The major purposes of the junior high school are —

I. *To provide a suitable educational environment for children approximately twelve to sixteen years of age*, embracing:

1. An enlarged experience background, involving especially — (a) enriched curricula and courses of study; (b) improved facilities by way of laboratories, shops, libraries, assembly halls, and gymnasiums; (c) superior teachers, including a larger percentage of men; (d) new methods of teaching and social control; and (e) a distinctive school atmosphere.

2. Ample provision for common socialized integrating education.

3. Abundant facilities for the progressive discovery and experimental direction of pupils' interests, aptitudes, and abilities, involving especially — (a) exploratory activities in varied occupational fields; (b) general and survey courses in the major academic fields; (c) individual and social diagnoses; (d) flexibility in curriculum organization and administration; and (e) educational and vocational guidance.

4. Adequate provision for individual differences, involving especially — (a) enriched curricular and extra-curricular offerings; (b) opportunities for gradual curriculum differentiation; (c) flexibility in methods of promotion; (d) provision for varying rates of progress; and (e) vocational training for those who must leave school early.

5. Increased opportunities for genuine socialization, involving especially — (a) an adequate program of extra-curricular activities; and (b) extensive provision for pupil participation in school government.

II. *To democratize the school system*, through —

1. Provision for a gradual transition from elementary to secondary education in such matters as (a) content, (b) methods of teaching, and (c) social and administrative control.

2. The democratization of educational opportunities.

III. *To effect economy of time in education*, largely through —

1. The elimination of waste from the seventh, eighth, and ninth grades.

This statement of the purposes of the junior high school, the reader will observe, brings three major purposes into the foreground and treats the rest as contributory. It places the emphasis first of all upon the needs of children as individuals and as members of society; then upon the school system as an instrument of democracy; and finally upon the educational program from the standpoint of its economy and efficiency. In succeeding chapters we shall endeavor to characterize the program of studies, the program of extra-curricular activities, and the administrative organization which are essential for the realization of these purposes.

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CHAPTER VI

THE PROGRAM OF STUDIES

The program of studies of the junior high school — the curricular experiences which it will make available for pupils — must be chosen in the light of the major purposes of the new institution, with special reference to the main objectives of education, and as far as possible in accordance with the technique of scientific curriculum-making. The major purposes of the junior high school were set forth at some length in the preceding chapter; the main objectives of education and the technique of scientific curriculum-making we shall discuss at this point.

THE OBJECTIVES OF EDUCATION AND THE TECHNIQUE OF SCIENTIFIC CURRICULUM-MAKING

General character of most statements of educational objectives. As the student of education knows, there has been no dearth of statements of educational aims in the past. Unfortunately, however, most of these have been too abstract and too general to influence curricular practices appreciably. Indeed, as Charters points out, such statements have all too often been statements of "ideals isolated from activities," and this in spite of the fact that the curriculum is dependent upon "both ideals and activities." In consequence, there has usually been but little correspondence between educational ideals and educational practices. Even the most striking changes in educational ideals —

changes brought on by vast upheavals in world thought — have as a rule, as Charters adds, influenced curricular practices but slightly.¹

Recent attempts to define educational objectives in terms of life functions and to utilize a scientific technique in curriculum-making. The last few decades have witnessed a marked advance in this respect. Never before have there been so many sincere attempts to define educational objectives in terms of life functions and to utilize a scientific technique in curriculum-making. The two most recent attempts in this direction — that of the reviewing committee of the Commission on the Reorganization of Secondary Education of the National Education Association, and that of Dr. Franklin Bobbitt and the Los Angeles high-school staff — are of special interest to us at this point.

The objectives of education and scientific curriculum-making according to the reviewing committee of the Commission on the Reorganization of Secondary Education. The Commission on the Reorganization of Secondary Education, consisting of some sixteen special committees and a reviewing committee, began its work in 1913 as a direct outgrowth of the Committee on the Articulation of High School and College. It has concerned itself especially with “the organization and administration of secondary schools and with the aims, methods, and content of the various studies.” The reviewing committee, consisting of the chairmen of the special committees and ten members chosen at large, was created “to assist the special committees through constructive criticism.” It early felt the need of a statement of “those fundamental principles that would be

¹ Charters, W. W., *Curriculum Construction*. The Macmillan Company, 1923. Chap. I.

most helpful in directing secondary education " and proceeded to formulate such a statement. In 1918, after three years of arduous labors, this statement was issued in the form of " Cardinal Principles of Secondary Education." ¹

In discussing the main objectives of education, the committee took the significant position that these must be determined by the activities of the citizen in a democracy. It said in part:

In order to determine the main objectives that should guide education in a democracy, it is necessary to analyze the activities of the individual. Normally he is a member of a family, of a vocational group, and of various civic groups, and by virtue of these relationships he is called upon to engage in activities that enrich the family life, to render important vocational services to his fellows, and to promote the common welfare. It follows, therefore, that worthy home-membership, vocation, and citizenship, demand attention as three of the leading objectives.

Aside from the immediate discharge of these specific duties, every individual should have a margin of time for the cultivation of personal and social interests. This leisure, if worthily used, will re-create his powers and enrich life, thereby making him better able to meet his responsibilities. The unworthy use of leisure impairs health, disrupts home life, lessens vocational efficiency, and destroys civic-mindedness. The tendency in industrial life, aided by legislation, is to decrease the working hours of large groups of people. While shortened hours tend to lessen the harmful reactions that arise from prolonged strain, they increase, if possible, the importance of preparation for leisure. In view of these considerations, education for the worthy use of leisure is of increasing importance as an objective.

To discharge the duties of life and to benefit from leisure, one must have good health. The health of the individual is essential also to the vitality of the race and to the defense of the nation. Health education is, therefore, fundamental.

¹ "Cardinal Principles of Secondary Education." U. S. Bureau of Education, *Bulletin No. 35*, 1918.

There are various processes, such as reading, writing, arithmetical computations, and oral and written expression, that are needed as tools in the affairs of life. Consequently, command of these fundamental processes, while not an end in itself, is nevertheless an indispensable objective.

And finally, the realization of the objectives already named is dependent upon ethical character — that is, upon conduct founded upon right principles clearly perceived and loyally adhered to. Good citizenship, vocational excellence, and the worthy use of leisure go hand in hand with ethical character: they are at once the fruits of sterling character and the channels through which such character is developed and made manifest. On the one hand, character is meaningless apart from the will to discharge the duties of life, and, on the other hand, there is no guarantee that these duties will be rightly discharged unless principles are substituted for impulses, however well intentioned such impulses may be. Consequently ethical character is at once involved in all the other objectives and at the same time requires specific consideration in any program of national education.

This commission, therefore, regards the following as the main objectives of education:

1. Health
2. Command of fundamental processes
3. Worthy home-membership
4. Vocation¹
5. Citizenship
6. Worthy use of leisure
7. Ethical character¹

The committee then proceeded to discuss these objectives in terms of secondary education. In a general way at least, it subjected each to further analysis and pointed out some of the more important ideals and activities which are essential for its realization. Regarding education for citizenship, for instance, the committee expressed itself in part as follows:

¹ *Op. cit.*, pp. 10-11.

Civic education should develop in the individual those qualities whereby he will act well his part as a member of neighborhood, town or city, state, and nation and give him a basis for understanding international problems.

For such citizenship the following are essential: a many-sided interest in the welfare of the communities to which one belongs; loyalty to ideals of civic righteousness; practical knowledge of social agencies and institutions; good judgment as to means and methods that will promote one social end without defeating others; and, as putting all these into effect, habits of cordial coöperation in social undertakings. . . .

Among the means for developing attitudes and habits important in a democracy are the assignment of projects and problems to groups of pupils for cooperative solution, and the socialized recitation whereby the class as a whole develops a sense of collective responsibility. . . . Moreover, the democratic organization and administration of the school itself as well as the coöperative relations of pupil and teacher, pupil and pupil, and teacher and teacher, are indispensable.

While all subjects should contribute to good citizenship, the social studies — geography, history, civics, and economics — should have this as their dominant aim. Too frequently, however, does mere information, conventional in value and remote in its bearing, make up the content of the social studies. History should so treat the growth of institutions that their present value may be appreciated. Geography should show the interdependence of men while it shows their common dependence on nature. Civics should concern itself less with constitutional questions and remote governmental functions, and should direct attention to social agencies close at hand and to the informal activities of daily life that regard and seek the common good. Such agencies as child-welfare organizations and consumers' leagues afford specific opportunities for the expression of civic qualities by the older pupils.

The work in English should kindle social ideals and give insight into social conditions and into personal character as related to these conditions. Hence the emphasis by the committee on English on the importance of a knowledge of social activities, social movements, and social needs on the part of the teacher of English.

The comprehension of the ideals of the American democracy and

loyalty to them should be a prominent aim of civic education. The pupil should feel that he will be responsible, in cooperation with others, for keeping the nation true to the best inherited conceptions of democracy, and he should also realize that democracy itself is an ideal to be wrought out by his own and succeeding generations.

Civic education should consider other nations also. As a people we should try to understand their aspirations and ideals that we may deal more sympathetically and intelligently with the immigrant coming to our shores and have a basis for a wiser and more sympathetic approach to international problems. Our pupils should learn that each nation, at least potentially, has something of worth to contribute to civilization and that humanity would be incomplete without that contribution. This means a study of specific nations, their achievements and possibilities, not ignoring their limitations. Such a study of dissimilar contributions in the light of the ideal of human brotherhood should help to establish a genuine internationalism, free from sentimentality, founded on fact, and actually operative in the affairs of nations.¹

This statement of some of the ideals and activities which are essential for the realization of one of the main objectives of education makes it quite clear that the committee viewed the several subjects of the program of studies as means toward the realization of the main objectives of education and not as ends in themselves. The significance of this point of view cannot be overestimated. When fully embodied in actual practice, it will mean an almost complete revolution in education. In other words, it will cause us to turn our attention from the teaching of subjects to the development of certain fundamental forms of functional behavior. To this end we shall of course continue to use subject-matter, for in the broad sense this represents the experiences that educate. Also, for a long time to come at least, we shall continue to use subject-matter in the form

¹ *Op. cit.*, pp. 13-15.

of the customary subjects, though many of these will of necessity be subjected to a fundamental reorganization in the course of which much that is now included will be eliminated and much that is now excluded will be added. In speaking of such a reorganization, the committee said in part:

Each subject now taught in high schools is in need of extensive reorganization in order that it may contribute more effectively to the objectives outlined herein, and the place of a subject in secondary education should depend upon the value of such contribution.¹

Beyond this, most of the special committees of the commission concerned themselves with the reorganization of the several subjects which are usually included in the program of studies for junior and senior high schools. The reports of these committees, although they constitute in the very nature of the case only a beginning in the right direction, have already exerted a most wholesome influence upon curricular practices in secondary schools. Especially have they contributed invaluable aid to the reorganization of subject-matter for junior high schools.

Educational objectives and scientific curriculum-making according to Dr. Franklin Bobbitt and the Los Angeles high-school staff. During the latter part of the autumn of 1921 the Los Angeles high-school staff, assisted by the Bureau of Educational Research, entered upon the task of reorganizing the courses of study for junior and senior high schools. A little later Dr. Franklin Bobbitt, of the University of Chicago, was called in to "assist in formulating plans and materials and in getting the work under way." In speaking of the basic assumption upon which the task was undertaken, Dr. Bobbitt says:

¹ *Op. cit.*, p. 16.

Education aims to produce results. These results are human abilities, habits, attitudes, appreciations, skills, powers of judgment, personal characteristics of various kinds, etc. The first practical task of curriculum-making is to draw up for working purposes a list of the several kinds of specific abilities and other human characteristics which are to be the result of education. Every item in a curriculum is but a means to an end; it is necessary first, therefore, to know what these various ends are.

Education has always aimed at objectives. These have usually been memories well stocked with examinable textbook information, and ability to deal with conventional textbook materials in well-known classroom ways. The academic objectives have rarely been the abilities which should currently function in everyday life. Rarely has education looked to the life of the community by way of discovering its specific objectives.

The Los Angeles labors assumed that textbook information is a *means*, not an *end*; that it is not a thing merely to be memorized without looking beyond; but that it must look forward to abilities and personal qualities actually needed by the men and women of the city.

We, therefore, first undertook the task of drawing up a comprehensive list of human abilities and characteristics which appear to be generally needed by the citizens of Los Angeles. It was not supposed that the schools would systematically attempt to develop each of the many characteristics and abilities. It was obvious that many of them are of such a simple nature that they can be developed by observing and participating in the general community life. The presumption, however, was that if we had a complete series of the generally needed abilities and characteristics, from this comprehensive list we could select those which were so complex and difficult as to require the labors of the educational profession. This portion of the total list would comprise the objectives of education.¹

¹ Bobbitt, Franklin, "Curriculum-Making in Los Angeles." *Supplementary Educational Monographs*, No. 20, University of Chicago, 1922. This monograph is now out of print, but the material is reproduced in amplified form in Dr. Bobbitt's recent book, *How to Make a Curriculum*, published by Houghton Mifflin Company.

Classes of desirable abilities and characteristics. Dr. Bobbitt accordingly placed before the Los Angeles committees a suggestive list of such abilities and characteristics, a list which had been drawn up coöperatively in the course of several years, and asked them to formulate, with this as a starting point, "a list of human abilities and characteristics which in their judgment were desirable for the men and women of that city — irrespective of whether the schools were to adopt them as their objectives or not." When completed, the list comprised the following ten classes of desirable abilities and characteristics:

1. *Social intercommunication, mainly language*, embracing such abilities and characteristics as the following:

Ability to organize and express one's thoughts effectively.

Ability to locate in the library the material on any topic.

Ability to read and interpret facts expressed by commonly used types of graphs, diagrams, and statistical tables.

2. *The development and maintenance of one's physical powers*, embracing such abilities and characteristics as the following:

A balanced or well proportioned development of the physique (within the limits set by heredity).

Ability to make one's food contribute in maximum measure to one's physical well-being.

Ability to utilize muscular exercise as a lifelong means of developing and maintaining a high level of physical vitality.

Ability to keep reasonably well informed, in the degree to be expected of a layman, as to the discoveries of science in the fields of health conservation and promotion.

3. *Unspecialized practical labors*, embracing such abilities and characteristics as the following:

Ability to use all common kinds of measuring devices: measures of length, area, volume, capacity, weight, temperature, time, etc.

Ability to select furniture, draperies, floor-coverings, decorations, etc., from the point of view of economy, durability, and serviceability.

Ability to care for a motor car: lubrication, making adjustments, cleaning, renewing simple accessible worn parts, mending and changing tires, etc.

Ability to manage properly a bank checking account.

4. *The labors of one's calling.* [Each specialized occupation is being analyzed separately to determine "the specific tasks, processes, habits, skills, powers of thought and judgment, etc., that are involved," and the objectives are being assembled by special investigators and committees.]

5. *The activities of the efficient citizen*, embracing such abilities and characteristics as the following:

The possession of a vivid and active *citizenship consciousness* — or large-group consciousness — which looks primarily to the general welfare of community, state, nation, and family of nations.

The ability to use general principles in the solution of economic, political, and other social problems.

Ability to substitute intelligence for physical force as the method of adjusting social differences.

A full knowledge of all laws which one is expected to obey.

6. *Activities involved in one's general social relationships and behavior*, embracing such activities as the following:

Ability to act in those sympathetic, tactful, and human ways that are both most agreeable and also most effective in the conduct of one's relations with one's associates.

The ability to associate easily and naturally with individuals of diverse interests and specialties.

Thoughtfulness for the personal comfort of others.

Ability to control one's temper.

7. *Leisure occupations, recreations, amusements*, embracing such abilities and characteristics as the following:

Ability, disposition, and habit of abundant and greatly diversified *reading* as a means of enjoyable and fruitful indirect observation of men, things, and affairs and of vicarious participation in those affairs.

Ability, disposition, and habit of taking up occasionally the systematic *study* of some new thing in which one is interested.

Ability to use the *outdoor* life of nature as a source of recreation for both body and mind.

Ability to participate fully in desirable activities of social clubs.

8. *Development and maintenance of one's mental efficiency*, embracing such abilities and characteristics as the following:

A well exercised and properly developed sense of humor.

Ability to think in terms of realities.

Ability to see and judge one's abilities, capacities, aptitudes, strengths, weaknesses, shortcomings, etc.

A philosophy of life which is, so far as possible, grounded in science — physical, biological, psychological, and social.

9. *Religious activities*, embracing such abilities and characteristics as the following:

A sense of the brotherhood of man.

A sense of the rights of others and of one's duties to others.

Equally, a sense of one's own rights and of the duties of others towards one.

The maintenance of a lifelong Wonder in the presence of limitless Phenomena through the midst of which passes the orbit of man's life.

10. *Parental activities, the upbringing of children, the maintenance of the home life*, embracing such abilities and characteristics as the following:

The physical qualities necessary for parenthood of desirable type.

The mental, moral, and social qualities necessary for parenthood of proper character.

Ability to supply the material needs of their children.

Ability to control the children's contacts with the general life of the community, juvenile and adult, in the interests of the children's right upbringing.

Factors entering into ability. After Dr. Bobbitt and the Los Angeles committees had in a measure assembled the abilities and characteristics which education should produce, they proceeded to analyze the term "ability" in order to determine the factors entering into it. The result was a general list of some fifty factors. Not all of these were of course expected to enter into any one ability. The following are typical illustrations:

Interest in the things involved: materials, forces, processes, experiences, results, etc.

A habit of planning carefully prior to action, where the latter has not yet been reduced to habit.

Ability instantly to recognize defect, error, shortcoming in either process or result.

Habit of correcting errors as soon as discovered.

Tenacity of purpose, persistence, industry, etc., in achieving the results desired.

Confidence in one's ability to do the things involved and to achieve the desired results.

Openness of mind toward new things, new developments, new inventions, etc., in a given field.

Courage in facing and grappling with obstacles.

The curriculum in relation to educational objectives. When the educational objectives, the desirable human abilities and characteristics, had been determined and analyzed, the question arose: "What are the activities and experiences on the part of pupils which are necessary for achieving these objectives?" The answer to this question was: "The pupil experiences and activities are the curriculum." In other

words, a sound curriculum consists of the pupil activities and pupil experiences which are essential for the realization of the objectives of education.

Basic assumptions regarding educational objectives and pupil experiences. Before taking up the question of the curriculum, however, it appeared essential to draw up certain basic assumptions or guiding principles regarding the educational objectives and the pupil experiences. Two lists of such assumptions or principles were accordingly drawn up. The first list, bearing on the educational objectives, comprises such as the following :

1. The characteristics and abilities which should be possessed by men and women of the adult world are the things to be developed through the processes of education. They are the educational objectives.
2. The first practical task involved in curriculum construction is to determine as fully and as accurately as possible the entire range of characteristics and abilities which should belong to well developed men and women.
3. The abilities and characteristics are to be discovered only by careful analysis of desirable human activities in all fields of human affairs.
4. The characteristics and abilities must be no narrow or limited series. The list should be as wide as human life in all of its desirable aspects.
5. Each characteristic or ability to be aimed at should be definite.
6. Individuals differ in the capacity to develop the several abilities and characteristics.
7. In the case of any individual, education will aim at the abilities and characteristics which are possible for him.
8. Education will not aim at abilities that are not potential in the native capacity of the individual.
9. Education will aim at different degrees or levels of ability for different individuals according to their native capacity.

10. Education will often aim at different degrees of ability for individuals of the same native capacity because of differences in their social, geographical, or vocational situation.

11. Each child — so far as it can be administratively managed — is to be trained according to his individual capacity and needs.

12. Outside of training for their specialized occupations, the educational objectives, in kind and in general outline, will be much the same for all individuals; in details and in degree of achievement, they will differ greatly among individuals according to natural capacity and social situation.

13. The characteristics and abilities discovered through analysis should be divided into two lists: (1) Those that are sufficiently developed through the outside normal processes of living, and which, therefore, require no scholastic labor; and (2) those that require scholastic effort in addition to the outside experiences of normal living. Only the second list will require professional attention in formulating the school's curriculum.

NOTE. — The experiences involved in the normal processes of living, at whatever age, we shall call fundamental educational experiences. Those which are consciously designed to prepare one for the normal processes of living — which are not regarded as life itself, but only as preparatory for life — we shall call accessory educational experiences.

14. Diversity of objectives, especially as regards level of attainment, negatives the possibility of uniform inflexible courses of study, the same for all.

15. For each ultimate objective, progress objectives should be set up to mark the several levels of attainment. These are the standards of achievement for the several grade levels.¹

The second list, bearing on the pupil experiences, comprised such as the following:

1. Experiences alone educate.
2. After making allowance for the hereditary factor, the education of any person is wholly determined by the experiences he has had.

¹ *Op. cit.*, pp. 41-42.

3. A curriculum is the series of experiences to be had by an individual as the means and condition of achieving the several educational objectives.

4. Fundamental experiences — as defined above — are the ones that are educationally most effective.

5. For attaining each objective, fundamental experiences of the best practical type are to be used in maximum measure.

6. For attaining each objective, accessory experiences are to be used only in the degree in which the results cannot be effectively or economically attained through fundamental experiences. They are to be used in minimum measure — though, of course, as much as conditions make necessary.

7. Accessory experiences are effective in the degree in which they are involved in or related to the fundamental experiences with which they are concerned; or in the degree in which they are suffused with the play spirit while maintaining the work vision and sense of responsibility.

8. A major test of the success of the school work is the measure in which the accessory activities have taken on the characteristics of fundamental activities.

9. Most fundamental experiences of the play type require careful guidance and leadership, much of which should be provided at, or in connection with, the schools. Educational play experience must not be irresponsible.

10. All preparatory or accessory educational experiences should be definitely and consciously preparatory for clearly seen activities or abilities. (The child should never work in the dark, not knowing his objective. He may play without knowing the educational objectives of his play. His teachers will know.)

11. The fundamental experiences, whether of play or work type, must differ with the stages or levels of maturity of the children.

12. The curriculum must therefore consider the physical and psychological constitution of the children on their different age levels; and for each level utilize only types of fundamental experiences that are appropriate to that level.

13. Accessory experiences must differ with the levels of maturity; the curriculum must provide according to the physical and psychological possibilities of each level.

14. The beginning of the work of developing any objective will be made only when the pupil has attained the requisite degree of maturity.

15. The training for any objective is to cease as soon as that objective is attained in desired degree — whatever the stage of maturity.

16. After an ability has been developed, the educational purpose then becomes changed. The purpose then becomes maintenance of the ability, so as to prevent deterioration.

17. Pupil experience at any given stage of development must be a normal continuation of previous experiences.

18. Pupil experiences will differ with the social situation and opportunity of the children, even with the same objectives, more where objectives differ.

19. In determining the pupil experiences to be employed in attaining each objective, the curriculum-maker must find the well-springs of action and effort that can be utilized in prompting to greatest endeavor.

20. The method of practical and, when possible, experimental tryout is to be used in testing the efficacy of pupil experiences of all types and on all levels.

21. Diversity of needed experiences, even in the case of the same general objectives, negatives the possibility of uniform inflexible courses of study, the same for all.

22. Experiences on all levels of maturity should be diversified and involve all normal and desirable aspects of one's being.¹

Organization of pupil experiences. At this point the question arose whether the experiences through which the educational objectives are to be realized should be grouped under the traditional subjects and departments, or whether it might be better to organize them in new ways more in keeping with their functions. For various reasons it was decided to retain the traditional form of organization and to have each department select and stress those functional

¹ *Op. cit.*, pp. 42-44.

experiences which naturally fall within its domain. In discussing this problem, Dr. Bobbitt says:

When human characteristics and abilities are listed in the form presented in Chapter II, it appears that (1) we might aim at them individually without regard to the usual subjects or departments; (2) we might group them in such a way as to develop subjects or departments of new and different kinds; or (3) we might distribute them among the present subjects and departments.

It is probable that the different high-school departments have grown up in such a way as to bring together the things which more or less naturally belong together. This needs to be assumed until the contrary is demonstrated. On the other hand, practical considerations make necessary the continuance of studies and departments that are not too much removed from the usual ones. College entrance requirements involve certain expectations. Regulations of the state department and of the legislature presume the continuance of certain subjects and departments. Teachers are specialized along departmental lines. Textbooks are so prepared. It is obvious, therefore, that what is to be done in the immediate future must assume the continuance of the usual departments and simply seek to make their objectives more definite and their procedures more effective. It is a problem of "next steps of progress" in connection with each high-school department.¹

Each department was, therefore, asked to search through the "comprehensive series of abilities" which had been drawn up for the city as a whole and to select those which it should assist pupils to achieve. In speaking of this, Dr. Bobbitt says:

For example, the teachers of literature were asked to go through the entire series and discover that list of characteristics and abilities which literature might be instrumental in achieving. This list, then, brought together and possibly differently worded, becomes the objectives of the department of English in its handling of literature.

¹*Op. cit.*, p. 37.

The plan permits no opportunity for special departmental predilections which have no relation to actual needs. The needs were determined prior to these first labors of the department of English and by a group which in the aggregate and in the majority was not primarily interested in the English department.

In the same way, the department of mathematics went through the series and selected those abilities which mathematics could be used to achieve. The biological science department selected those appropriate to biological science; and the physical science department those appropriate to physical science. In the same manner, each department found its objectives in the same general list of human characteristics and activities. The plan automatically shut out a number of forms of special pleading which usually interfere in the setting up of objectives of the several departments.¹

Finally, a careful distinction was drawn between general training and vocational training. The former was defined as the training which all individuals require, irrespective of the specialized callings into which they may go, and which will be much the same for all "except as they differ in natural capacity and aptitude." The latter was characterized as the specialized training for specific callings. This distinction, Dr. Bobbitt pointed out further, will in actual practice make it necessary for each department to organize its materials twice—once for the general training and once for the vocational.

The Los Angeles courses of study. It remains to be pointed out that the courses of study for junior and senior high schools in Los Angeles are now being organized by the several departments under the direction of the Bureau of Educational Research and in keeping with the technique which we have outlined. The initial directions to the committees of the several departments were as follows:

¹ *Op. cit.*, pp. 37-38.

Committees are requested to follow this outline in assembling their reports in final form:

Section I. General Introduction

Copy to be prepared by Mr. — (Director of High-School Research). This section will be common to all monographs.

Section II. Platform of Principles

This will be a series of numbered statements which set forth the educational platform of the department concerned.

Section III. Departmental Objectives

A series of numbered statements which present the educational objectives of the department. Each objective should be stated in terms of "ability to do." Each objective should begin, "Ability to. . ."

Section IV. Pupil Experiences

This will be a series of numbered statements under each objective stating definitely what pupils will do by way of achieving the objective. In departments where there is considerable overlapping of objectives, the pupil experiences should be consolidated in a single numbered series. Each pupil experience should begin, "The pupil will . . ." or "He will . . ." or "She will. . ."

Section V. Outline of Course

This will give the layout of the course-content by years, semesters, or shorter units.

Section VI. Bibliography

Section VII. Miscellaneous

The following suggestion is offered concerning the form of individual courses in Section V:

B-7 Literature

A. Objectives

1. Ability to _____
2. Ability to _____
3. Ability to _____

B. *Minimum Essentials*

Of the foregoing objectives, Nos. —, —, — are the minimum essentials of this course.

C. *Work to Be Done*

1. _____
2. _____
3. _____

D. *Authorized Text***E. *Supplementary Materials*****F. *Miscellaneous Suggestions*¹**

Essential steps in scientific curriculum-making. With the two most representative attempts at scientific curriculum-making before us, we may proceed to summarize briefly what appear to be the essential steps in scientific curriculum-making. The following stand out conspicuously:

1. *Determining the abilities and characteristics which human beings should possess.* In the first place it is obviously essential to determine the abilities and characteristics which human beings should possess. These abilities and characteristics constitute the objectives of education. In determining these we must be as far as possible objective and specific. We must study humanity in action. Only in this way is it possible for us to single out the equipment which it needs in order to deal effectively with its environment.

A mere listing of essential and desirable abilities and characteristics constitutes of course only a starting point. Many of these abilities and characteristics are obviously highly complex and must be further resolved, somewhat after the manner of what has come to be known as "job

¹ Los Angeles City Schools, *High-School Research Bulletin*, Vol. II, No. 14.

analysis." Beyond this, the abilities and characteristics in question vary in importance, some being essential in varying degrees and others merely desirable. Under these circumstances careful evaluation is of course quite indispensable.

Finally, there are vast individual differences, psychological and social, and these necessitate, especially in the course of the secondary period, as Snedden points out,¹ the segregation of certain major groups or classes of learners. Within reasonable limits at least, the abilities and characteristics in question must, therefore, be determined in the light of the needs and interests of different groups of individuals.

2. *Determining standards of achievement.* In the second place it is imperative that we determine the degrees of proficiency to which the several abilities and characteristics should be raised. In other words, we must determine standards of achievement. This step, too, is rather complicated. We are obviously in need of a great variety of standards — standards for abilities and characteristics which all need in common, and standards for abilities and characteristics required by widely varying groups or classes of individuals.

Moreover, we need proximate as well as ultimate standards. The latter represent only the final goals, the degrees of essential or desirable adult proficiency. With these alone, the vast sea between the beginning and the end remains uncharted and vague. The former represent successive intermediate steps or goals of achievement. They enable us to determine from time to time where we are and what progress we are making. They are, therefore, quite indispen-

¹ Snedden, David, "Bobbitt's Curriculum-Making in Los Angeles." *School Review*, Vol. XXXI, pp. 104-108.

sable. We need them for each of the main divisions of our school system — the kindergarten, the elementary school, the junior high school, and the senior high school. We need them, moreover, for each of the several grades into which these divisions have been divided, and for a variety of smaller subdivisions.

3. *Selecting and organizing the pupil activities and pupil experiences through which the several abilities and characteristics are to be developed.* In the third place we must obviously select and organize the pupil activities and pupil experiences through which the several abilities and characteristics which constitute the objectives of education are to be developed. This is doubtless the most difficult task of all. Here, more than anywhere else, we encounter tradition and custom. The activities and experiences from which we must choose are, moreover, very numerous, and not infrequently the least effective are the most strongly entrenched.

The most serious obstacle which we encounter is without question logically organized subject-matter. There is of course nothing wrong with this in itself; only it will not function effectively with reference to the ends toward which we are striving unless it has been carefully selected and reorganized. Unfortunately we have taught it so long and so persistently, without reference to anything much more definite than vague educational ideals, that it is very difficult for us to recognize this fact. Our problem is very obviously to resolve this formal material and to select those elements which will function effectively. Beyond this, it is imperative that we look about us and select extensively from the mass of activities and experiences which have not yet been considered worthy of inclusion among the formal subjects, but which are, nevertheless, highly educative.

Our task of choosing suitable pupil activities and pupil experiences to achieve the educational objectives toward which we are striving is, of course, further complicated by the fact that we must choose these with special reference to the interests, needs, and capacities of children at different levels of development, and with special regard for the interests, needs, and capacities of different groups and classes of individuals.

4. *Proceeding as far as possible in accordance with recognized educational principles.* Finally, it is clearly essential that we proceed from beginning to end as far as possible in keeping with such educational principles as are available. Some of these will obviously bear on the educative process as a whole; others will relate to it from the standpoint of different levels of development; and still others will relate to the determination of the objectives of education, the formulation of standards of achievement, and the selection and organization of pupil activities and pupil experiences.

PROGRAM-MAKING FOR JUNIOR HIGH SCHOOLS

With the major criteria of program-making before us, we may proceed with our discussion of the junior high school program of studies. In this we shall do little more than point the way. The actual determination of the junior high school program of studies is a stupendous task, a task which must inevitably enlist the coöperative talent of the entire commonwealth.

Determining the objectives of education and interpreting them in terms of the junior high school level. The first step in junior high school program-making is obviously the determination of the basic objectives of education and their interpretation in terms of the junior high school period.

In the last section were viewed at some length the objectives of education as set forth by the Commission on the Reorganization of Secondary Education and by Dr. Franklin Bobbitt and the Los Angeles high-school staff. The chief difference between these two lists of educational objectives appears in the fact that the latter includes three classes in addition to those represented by the former, namely:

1. Unspecialized practical labors
2. Development and maintenance of one's mental efficiency
3. Religious activities

The essence of the last of these classes — religious activities — is really included under "ethical character," and so need not concern us further from the standpoint of public education. The other two classes — unspecialized practical ability and mental efficiency — represent, we believe, significant extensions, and should be included in any statement of educational objectives. Adding these to the list advanced by the Commission on the Reorganization of Secondary Education, we have the following classes of educational objectives:

1. Health
2. Command of fundamental processes
3. Worthy home-membership
4. Vocation
5. Citizenship
6. Worthy use of leisure
7. Ethical character
8. Unspecialized practical ability
9. Mental efficiency

As far as the assembling of the abilities and characteristics which fall under each of these classes of objectives is con-

cerned, Dr. Bobbitt and the Los Angeles high-school staff have pointed the way most effectively, from the standpoint of both method and content. The next few years will doubtless witness marked progress in this direction. Not only will the method of procedure be perfected, but the results will be extended and clarified. Meanwhile, those who are engaged in formulating junior high school programs of studies will find these specific classes of objectives the best possible point of departure.

The most difficult problem which the program-maker faces at present is to interpret these basic educational objectives in terms of the junior high school period. Any attempt in this direction must inevitably raise such questions as: Which of the ultimately essential and desirable abilities and characteristics represented by the several classes of basic objectives constitute the valid objectives of this period? Which are essential or desirable for all? Which for specific groups only? How much may the junior high school be expected to contribute toward the realization of the abilities and characteristics which fall peculiarly within its province? These questions must obviously be answered in terms of the needs, interests, and capacities of children of junior high school age, and in the light of the major purposes of the junior high school.

Determining junior high school standards of achievement. The question how much the junior high school may be expected to contribute toward the realization of the abilities and characteristics which fall peculiarly within its province raises the problem of standards of achievement. It is not sufficient merely to decide which of the ultimately essential and desirable abilities and characteristics the junior high school should foster. It is quite as

necessary, as a second step, to determine the extent to which the junior high school may be expected to develop these abilities and characteristics. The problem of standards of achievement must obviously be solved from the standpoint of the needs, interests, and capacities of children of junior high school age, and in the light of the major purposes of the junior high school.

Selecting and arranging pupil experiences and pupil activities for the junior high school level. Once the abilities and characteristics which the junior high school should foster have been decided upon and standards of achievement have been determined, it becomes of course necessary to select and organize the pupil experiences and the pupil activities through which these ends may be achieved most readily. As indicated earlier, this is a difficult task, a task which should be undertaken in a thoroughly scientific manner.

In most situations of practical life, means toward ends are chosen rather strictly on the strength of their efficacy. Education should constitute no exception in this respect, since the relationship between cause and effect is as constant here as elsewhere. As a matter of fact, however, we have only recently begun to accept this principle in practice. As indicated earlier, we were all too long busily engaged in teaching subjects, assuming that this would somehow lead to the realization of such general ideals as we had formulated. Such thinking as we did concerned itself largely with the justification and defense of our practices. Innumerable treatises on the teaching of this, that, and the other subject bear eloquent testimony to this fact.

Now that we are endeavoring to choose the materials of instruction in a scientific manner, we encounter many

obstacles. Logically organized subject-matter is firmly enthroned in the public mind. Teachers have been trained to teach subjects rather than to develop desirable forms of functional behavior. Textbooks, too, have been written largely from the subject-matter standpoint. Finally, there are many legal restrictions all along the line.

These obstacles are of course by no means insuperable. At the worst, they can only retard progress and render adjustment more gradual. As a matter of fact, much has already been accomplished. The former seventh- and eighth-grade subjects have been rather thoroughly overhauled in recent years. The successive investigations and reports of the committees on Minimum Essentials and Economy of Time were largely concerned with the experimental elimination of materials which were not functioning effectively with reference to definite educational objectives.¹ More recently, too, extensive new materials have been made available through the investigations and reports of the committee on New Materials of Instruction. These new materials were almost without exception experimentally determined.² The reports of the special committees of the Commission on the Reorganization of Secondary Education concern themselves in the same critical manner with

¹ National Society for the Study of Education, "Minimum Essentials in Elementary-School Subjects." *Fourteenth Yearbook*, 1915, Part I.—"Second Report of Committee on Minimum Essentials in Elementary-School Subjects." *Sixteenth Yearbook*, 1917, Part I.—"Third Report of the Committee on Economy of Time in Education." *Seventeenth Yearbook*, 1918, Part I.—"Fourth Report of Committee on Economy of Time in Education." *Eighteenth Yearbook*, 1919, Part II.

² National Society for the Study of Education, "New Materials of Instruction. Prepared by the Society's Committee on the Materials of Instruction. First Report." *Nineteenth Yearbook*, 1920, Part I.—"Second Report." *Twentieth Yearbook*, 1921, Part I.

the reorganization of many of the chief subjects of the program of studies for the six-year secondary period.

The movement for a more scientific selection of the materials of instruction is thus well on its way. The junior high school represents in this respect both an opportunity and an emergency. The fact that it is a new institution — an institution still largely in the making — with a new point of view and new purposes, makes possible unprecedented departures from traditional practices. Here more than anywhere else ought it to be possible to eliminate outworn and useless materials of instruction and to incorporate freely new materials which will function effectively with reference to definite educational objectives. Moreover, the spirit and the purposes of the new institution absolutely demand such a sifting and replenishing of the materials of instruction. The essence of the junior high school lies in this new and scientifically determined program of studies. Without this it would be a mere administrative device, a device in no way fitted to carry out the purposes for which it was called into being.

In keeping with the major purposes of the new institution, the junior high school program of studies must above all represent far greater richness and variety than has been customary in these grades heretofore. Without rich and varied activities and experiences the early adolescent, with his awakening social interests and his craving for action, cannot be properly initiated into the larger world of men and women. Only through the instrumentality of such activities and experiences is it possible for him to explore and to sound the world that lies ahead and to find his bearings in it.

The fact that the experiences and activities of the early adolescent should be extensive rather than intensive does

not imply of course that he requires no intensive training. He is obviously much in need of continued and rather intensive training with regard to certain fundamental habits and forms of skill. The defect of the old plan lay not so much in the fact that it provided intensive training in these grades as in the fact that it carried such training too far and applied it too extensively to such fields as the social sciences, the natural sciences, the fine arts, and the industrial arts where the early adolescent is in need of exploration rather than specialization.

But the materials entering into the junior high school program of studies must not only be rich and varied. They must also, as Briggs has well put it, "be in themselves worth while." The essentially useless — that which does not function effectively with reference to either proximate or ultimate educational objectives — must be unceremoniously eliminated. Only in this way is it possible for the junior high school to make a genuine contribution to economy of time in education.

Next in importance to the selection of the materials of instruction is their arrangement. We have already pointed out that these should be grouped as far as possible on the basis of function around the major objectives of education. To the extent that this is not possible at present, we are obviously thrown back on some form of subject organization.

At this point two alternatives present themselves: We may organize the materials, as has been customary in the past, rather logically in the form of specific units — giving us in the case of the social sciences such subjects as history, civics, geography, economics; in the case of mathematics such subjects as arithmetic, algebra, geometry; in the case

of the natural sciences such subjects as physiography, botany, zoölogy, physiology, hygiene, chemistry, physics; or we may organize the materials, as is becoming increasingly prevalent, psychologically — that is, from the standpoint of the needs, interests, and capacities of the learner, in the form of rather large natural units such as general social science, general natural science, general mathematics, language, the fine arts, and the industrial arts.

The former method has been in use so long and we have become so thoroughly accustomed to it that it is very difficult to supplant it. The greatest objection to it is that it does not present the materials in the order in which the learner requires them. It presents them in essentially finished form and in logical order — from the point of view of the specialist and not at all as the race dealt with them in the first place. Such organization is of course quite essential for some purposes, but for purposes of instruction it is unsuitable. It represents too many generalizations and too few of the particular activities and experiences which made these generalizations possible in the first place. It represents much, moreover, which, although quite essential to the subject as a logical unit of human experience, is irrelevant from the point of view of the learner and does not contribute to the realization of educational objectives. It prevents the learner, moreover, from dealing with the important activities and experiences in a given field, such as mathematics or natural science, in the order of their difficulty. He must complete one subject before he begins the next, and the last part of the former is often far more difficult than the first part of the latter.

The latter method — the method of grouping the materials of instruction from the standpoint of the needs, interests,

and capacities of the learner around a few major human interests, such as the social sciences, the natural sciences, language, mathematics, the fine arts, and the industrial arts — is increasingly coming into favor in elementary and junior high schools. In contrast with the former, it has everything to commend it from the standpoint of the learner. It is in the very nature of the case psychological rather than logical; that is, it presents the materials of instruction in the order and in the form in which the learner can deal with them most advantageously, rather than from the point of view of the specialist or with regard to the exigencies of logical organization. It concerns itself with the particular rather than the general, leading up to the latter only through an adequate consideration of the former. It begins with those activities and experiences within the several fields which make the most immediate contact with the needs of the individual as an adaptive organism, and it passes only gradually to the more remote. It progresses from the less difficult to the more difficult and from the simpler to the more complex.

Finally, the method facilitates orientation. The individual begins in the case of a given field, such as the natural sciences, with the near at hand and views the field as such essentially as a whole, making distinctions only gradually as he pushes out farther and farther. Distinctions arrived at in this manner have intrinsic meaning and significance from the very outset. They are part of the whole and need not be related in an artificial manner. The net outcome of such a procedure is that the individual's mental horizon grows ever larger and ever more varied, but instead of becoming confused by the increasing vastness and the growing diversity of the world about him he becomes more

confident and more secure. In other words, he is finding himself with regard to the great world about him. When he takes his place in it as a producer, as he will sooner or later, he will do so discriminately and not in haphazard fashion.

The greatest difficulty with this method of grouping the materials of instruction is that the teachers are as yet poorly prepared to use it. Most college graduates who are teaching in secondary schools, with the possible exception of the vocational experts in the senior high school, are too highly specialized. They are as a rule quite proficient in some special subject and somewhat at home with a related subject. Social science teachers, for instance, are apt to be quite proficient in some special branch of history, such as ancient history, European history, history of the United States, and fairly well at home with a related branch, or with a related field, such as economics. To sociology, political science, and the broader aspects of the history of civilization, they are likely to be strangers. Such teachers are, in the very nature of the case, severely handicapped in their endeavor to teach the social sciences in the junior high school. Similar conditions prevail of course in other fields. The teacher of English is only too often a specialist in literature with but slight knowledge of the English language. And this in spite of the fact that it is above all the function of the English teacher to direct pupils in acquiring skill in the use of the English language.

The remedy is rather obvious. Our colleges and universities must begin to train teachers so that they will be reasonably familiar with a given major field, such as the social sciences, and in such a manner that they will be able to arrange and present the materials in question from the standpoint of the needs, interests, and capacities of children.

Then we must of course give more attention to the organization of courses of study for the several major fields. This should be done under the guidance of experts, as far as possible, with the active participation of all the teachers.

The organization of junior high school curricula. The next step in the making of the junior high school program of studies concerns the organization of curricula. This step is obviously no less significant or important than the preceding one. Nor is it less difficult. Much depends of course upon the thoroughness with which the preceding step is taken. If the materials of instruction — the pupil activities and pupil experiences — have been selected with due regard to function and organized consistently from the standpoint of the needs, interests, and capacities of children of junior high school age, the problem of organizing junior high school curricula will be greatly simplified.

Principles governing the organization of junior high school curricula. Considerable progress has been made in the formulation of the principles which should govern the organization of junior high school curricula. Among the most outstanding are the following:

1. *Curriculum organization for junior high schools should be so elastic and so flexible that it will further in every possible way — (1) the discovery of the interests, abilities, and aptitudes of pupils; (2) the exploration of the major fields of human endeavor, academic and occupational; and (3) adaptation to individual differences in needs, interests, and capacities as fast as these are determined.*

Just what is meant by flexible curriculum organization and administration will become increasingly obvious as we proceed. Meanwhile certain implications stand out rather clearly. It is obvious, for instance, that the individual with

his interests, needs, and capacities, and the well defined group with its interests, needs, and capacities constitute the point of departure and the point of reference in such curriculum organization and administration. Subject-matter as subject-matter stands clearly in the background. It is a secondary consideration, a means and not an end. The focal points are the individual and the group; the all-important consideration is function; and the goal is genuinely functional behavior on the part of the individual, the group, and society at large. The outstanding problem of junior high school curriculum organization and administration is, therefore, to select and to combine in accordance with the exigencies of widely varying situations those activities and experiences which will enable us to achieve in each particular case as directly and immediately as possible the goal toward which we are striving—namely, genuinely functional behavior on the part of the individual and the group.

In its actual operation, flexible curriculum organization and administration implies obviously the possibility of forming as many different curricula as there are different situations. On paper there will of course appear no such multiplicity of curricula. Indeed, there might conceivably appear but one. As a rule, however, there will be several, shaped with reference to the needs of certain rather well defined groups, and so informally determined that they may be readily adapted to individual needs. Or, what amounts to essentially the same thing, there will be in operation a scheme of curriculum organization and administration based on constant and variable subjects which makes possible the formation and ready adaptation of as many curricula as are needed.

2. *In junior high school curriculum organization it is*

imperative to draw a careful distinction between constant materials required in common of all pupils, and variable materials intended for different individuals and groups, and to make adequate provision for both.

Human beings have in the last analysis much in common. They are intrinsically much more alike than they are different. In consequence they have not only many common interests and needs, but they must of necessity do many things in common. This is of course much more true of the citizens of a given nation than of humanity in general. On the other hand, human beings differ. They differ because nature has endowed them very variously; they differ because they have been subjected to widely varying environmental influences; and they differ because an increasingly complex civilization makes very varied demands upon them.

These facts — the fact that human beings have much in common, and the fact that they differ in certain fundamental respects — are of basic importance for curriculum organization and administration. This is particularly true once the secondary period has set in. Up to this point education concerns itself largely with the interests and needs which all have in common. With the beginning of the secondary period, however, it becomes increasingly necessary to minister, not only to the needs and interests which all have in common, but also to those interests and needs which are peculiar to different individuals and groups. Hence any secondary-school curriculum must necessarily represent two types of material — constant material required of all, and variable materials intended for different individuals and groups. It is, moreover, obviously of the greatest possible importance that a careful distinction should be made between these two types of materials, since

they serve very different purposes. Each should be chosen with reference to definite educational objectives and in accordance with the requirements of such objectives.

In actual practice we have as yet made but slight progress in this direction. The constants in existing junior high school curricula not only occupy too prominent a place but they vary altogether too much. They have obviously been selected largely on the strength of other considerations than common educational needs on the part of American children. The variables have on the whole been very inadequately provided for, and those which have been provided have not been chosen as definitely as they should have been in accordance with specific objectives. Scientific curriculum-making has, therefore, much to contribute at this point.

3. *The constant content of junior high school curricula should represent those minimum essentials which all need in common from the standpoint of the major educational objectives, and in addition such materials as may be utilized in common for exploratory purposes.*

In our discussion of the nine major classes of educational objectives, we stressed the fact that each of these represents two kinds of objectives — objectives to be achieved by all, and objectives to be achieved by different individuals and groups. The former should obviously in large part determine the constant materials which are to be embodied in junior high school curricula. Any serious attempt at junior high school curriculum organization, therefore, necessarily involves a careful canvass of the major classes of educational objectives in order that the minimum essentials which are needed in common by all may be singled out as a basis for the constant content. The choice of the constant

content is of course also influenced by such proximate objectives as the necessity of exploring the major fields of human endeavor for purposes of self-discovery and general orientation. In part at least, such exploration must be effected through constant materials organized in the form of general courses.

4. *The variable content of junior high school curricula should represent the materials which are needed for adaptation to individual differences and for further exploration.*

After the specific objectives which all need to achieve in common have been singled out from the several major classes of educational objectives, there remain many objectives in each class which should be achieved by different individuals and groups. Once more, any serious attempt at adequate curriculum organization must necessarily involve a careful canvass of the situation — the different individuals and groups and the specific objectives which each ought to achieve. Only in this way will it be possible to make a sound choice of variable curricular materials. The choice of variable materials is of course also influenced by such proximate objectives as the exploration of the needs, interests, and capacities of children for purposes of educational guidance and occupational orientation. This, too, necessitates the organization of subject-matter in the form of general courses.

5. *The constant content of junior high school curricula should gradually decrease and the variable content should gradually increase in the course of the junior high school period.*

It is generally agreed that the common needs of most children are still relatively large at the beginning of the junior high school period, and that these give way only gradually in the course of the period to the more distinctly

differentiated needs. This means, of course, if the junior high school is to constitute a suitable educational environment for children of this age, that the constant content of junior high school curricula should be large at the outset, and that this should gradually give way to variable materials as the period advances. Beyond this, it is quite generally agreed that a gradual transition from a dominantly constant to an increasingly variable curricular content is an essential step toward the realization of the second major purpose of the junior high school, namely, the democratization of our school system.

6. *Junior high school curricula should not be rigidly differentiated.*

In keeping with the principle that the transition from an essentially constant to an increasingly differentiated content should be gradual, it is generally agreed, further, that sharply differentiated curricula have no place in the junior high school. Indeed, such curricula are regarded as distinctly at variance with the fundamental purposes of the new institution. Koos's point of view is typical in this respect. He says:

But with all its advantages over present-day upper grade curricula and over the single curriculum type of program, it harbors a danger too grave to be passed without challenge. *This danger lies in its failure to provide ample opportunity for exploration and in what seems to be the assumption that this period in the pupils' school careers is one in which they have already fixed upon the general vocational groups, if not the specializations, which they will enter.* This assumption may be true of some pupils, especially the over-age, but the ephemeral character of the occupational choices of the young children and the impossibility of thus early assuring a satisfactory exploration of and by the pupils brands this type of program (multiple-curriculum type) as not fully appropriate.

Its advocates contend on the other hand that, as administered, the pupil may usually without penalty shift from one curriculum to another, and often does so. They suggest further that the dangers are largely mitigated by the provision in some plans of elective subjects in addition to those prescribed in the curricula. But in spite of the fact that choice of curriculum may not be irrevocable, the presumption is against the facility of transfer from one to another. There is likelihood, also, that too frequent changes will become irksome to those administering the program. The provision of additional electives is evidence that the plan has already proved inadequate and that it breaks down in application because it is impossible to multiply curricula sufficiently to recognize all the individual differences in abilities and interests to be found in a group of pupils enrolled in the seventh, eighth, and ninth grades.

We must find a type of program more in harmony with our desire for a democratic school system and defer the type we have been discussing, if it must be used, to the senior high school grades from which it has been borrowed and where differentiation is more suitable after the function of exploration has been performed.¹

Those who are opposed to sharply differentiated curricula favor as a rule the constants-with-variables plan of curriculum organization and administration. According to this plan the constant materials which all must pursue in common are carefully selected and set down as requirements for all. In addition, provision is made for an abundance of variable materials from which the different individuals and groups may select in keeping with their needs and interests, as far as possible under controlled conditions. Regarding the merits of this method of procedure, Koos expresses himself in part as follows :

Careful scrutiny . . . will discover that it has all the advantages in the realization of the peculiar functions possessed by the multiple-curriculum program and more. . . . At the same time it *remedies*

¹ *The Junior High School*, pp. 104-105.

the serious deficiency of the latter by making possible the performance of the function of exploration for guidance, a function too important to be disregarded at this time in the child's school life. In addition it will tend to recognize individual differences more satisfactorily by permitting a much wider variation of combinations of subjects in the making of curricula.

Its only deficiency when compared with the multiple-curriculum program is its greater difficulty of administration. Because in the constants-with-variables type of program the curricula of pupils for each semester or each year are not as predictable as in the second type, more time and effort must be given to advising with pupils concerning their peculiar plans. The problem of making daily and weekly programs also becomes more intricate. However, in questions where the two are involved, educational needs must take precedence over administrative convenience, especially where the former has such vital contact with the realization of a democratic school system as is here involved.¹

The opposition to differentiated junior high school curricula is thoroughly sound in so far as it is directed against sharp and rigid differentiation. On the other hand when it is directed, if it ever is, against curricula which are not sharply or rigidly differentiated — in other words curricula which, as is not infrequently the case, have been prepared largely to clarify curriculum organization in the minds of pupils and parents and to bring into bolder relief the functional possibilities of the program of studies — then it loses much of its force. As a matter of fact those who advocate the constants-with-variables basis of curriculum organization do not as a rule object to suggestive curricula which serve the purposes indicated above. Koos says:

The use of this third type of program does not preclude the desirability of mapping out, especially for the over-age or others who may have discriminatingly come to a decision upon a line of specialization

¹ *Op. cit.*, pp. 107-108.

which is to be begun, *suggestive* curricula adapted to the attainment of the ends the pupils have in mind. Such curricula will be found helpful in advising pupils and parents regarding work to be taken.¹

In actual practice, as will appear in the next section, these two methods of curriculum organization have thus far been much the same in their outcome. The cities which have the multiple-curriculum plan have much the same constants and variables as the cities which have the constants-with-variables plan, and the relationship between constants and variables is much the same in both cases. The same thing is true of the actual pupil and group curricula. The fact of the matter is that curriculum organization in junior high schools is intrinsically of the constants-with-variables type, even when differentiated multiple curricula are in evidence. The latter are as a rule merely administrative devices.

7. *Specialized vocational junior high school curricula should be provided only as emergencies.*

It is generally agreed, further, that specialized vocational training should have no place in the junior high school, except as an emergency measure. It is felt that the junior high school can minister most effectively to the vocational needs of pupils by confining itself, aside from continued common integrating education, to exploratory and pre-vocational activities — activities looking toward self-discovery, occupational orientation, and the acquisition of such preliminary knowledge and skill as are prerequisite to subsequent specialization.

Current practices in junior high school curriculum organization and administration. The extent to which current practices in junior high school curriculum organization and administration conform to the principles which have been

¹ *Op. cit.*, p. 108.

generally accepted in theory can be determined only through a study of actual conditions. Fortunately several investigations recently undertaken center largely about curricular practices in junior high schools. We shall briefly review the results of three of these. We shall also refer to the situation as it is being worked out in Los Angeles.

Smith's findings. Smith's investigation concerned itself with the general practices, including curricular practices, of junior high schools in sixty-four representative cities. The results, in so far as they bear on curriculum organization, are summarized in the following table:

ORGANIZATION OF PROGRAMS OF STUDIES¹

	Several definite curricula	Definite curricula in 8th and 9th	One curriculum only	Constants and electives (variables)	Change with little or no loss from one curriculum to another at end of		
					7	8	9
Total, 64 cities	16	6	9	33	44	42	30
Three-year systems, 46 cities	12	6	2	26	33	31	30
Two-year systems, 18 cities	4		7	7	11	11	

It will be observed that fifty-five, or 86 per cent, of these cities provide for curriculum differentiation of one kind or another, beginning with either the seventh or the eighth grade. The remaining nine, or 14 per cent—for the most part cities having two-year junior high school systems—provide but one common curriculum. The most popular method of curriculum organization is obviously that based on constants with variables. Thirty-three, or 60 per cent,

¹ Smith, W. A., "Junior High School Practices in Sixty-four Cities." *Educational Administration and Supervision*, Vol. VI, p. 146.

of the fifty-five cities which provide for curriculum differentiation organize their curricula on this basis. The remaining twenty-two, or 40 per cent, utilize the multiple-curriculum plan. A very large proportion — at least three fourths — of the cities which provide for curriculum differentiation permit pupils to change rather freely from one curriculum to another upon the completion of the several grades.

As might be expected, the results of that part of the investigation which concerned itself primarily with the reorganization of the materials of instruction and the distribution of constants and variables were not so encouraging. Smith characterizes the situation in part as follows :

According to the best educational thought, the junior high school idea involves as one of its most basic principles a rather thorough-going readjustment of subject-matter. In part such a readjustment calls for the introduction into the seventh and eighth grades of subject-matter usually taught in the four-year high school. To a considerable extent it demands the elimination of materials customarily taught in the seventh and eighth grades. Above all, however, it means a fundamental reorganization of all subjects, both old and new, to the end that they may meet the interests and needs of pupils of junior high school age. In succeeding paragraphs some account is given of the extent to which the several cities have — in the case of a few of the leading subjects — undertaken such a readjustment.

Fifty-two cities, 81 per cent in all, report that English has been reorganized. However, when reorganization is thought of in terms of certain rather definite criteria — the recommendations of the National Joint Committee on English, for instance — the percentage shrinks materially. Only a little over 60 per cent devote as much time to composition as to literature; about the same proportion have definitely substituted classics for selections ordinarily found in readers; slightly over 50 per cent are devoting as much as one half of the time allotted to composition to oral work; and approximately the same percentage report that the content for grammar and spelling has been experimentally determined.

Forty-eight cities, 75 per cent of the total, report that they have reorganized the work of the social studies in accordance with the needs and interests of early adolescents. As in the case of English, this percentage shrinks considerably when reorganization is thought of in terms of definite criteria — such as the recommendations of the Committee on Social Studies of the Commission on the Reorganization of Secondary Education of the National Education Association. Only a little over 30 per cent of the cities report a definite assignment of European history in the seventh and eighth grades; only 12 per cent mention state and local history; more than 50 per cent of the cities devote two fifths of the time allotted to the social studies in the seventh and eighth grades to geography, a similar amount to American history, and the remaining one fifth to civics; and less than 40 per cent of the three-year systems require a course in community civics or its equivalent in the ninth grade.

Some progress has been made toward the reorganization of mathematics. Not as much, however, as might be expected. Only 12 per cent of the cities report that the work in arithmetic in the seventh and eighth grades is largely occupational. The remainder state that it is either chiefly logical or both logical and occupational. Twenty-two per cent introduce elementary geometry in the seventh grade and 28 per cent in the eighth. Nine per cent begin elementary algebra in the seventh grade and 51 per cent in the eighth. In not a single instance is a sufficient amount of geometry and algebra taught in the seventh and eighth grades to enable the pupil to complete elementary algebra and plane geometry in the ninth grade — that is, in the time usually allotted to one subject.

Seventy-five per cent of the cities report a course in general science or its equivalent. In 23 per cent of the cases this is limited to the eighth grade; in 5 per cent it extends over the seventh and eighth; in 18 per cent over the eighth and ninth; in 14 per cent over the seventh, eighth, and ninth; and in 40 per cent it is limited to the ninth grade. The two-year systems are here again the most conservative, only 33 per cent offering such a course.

Seventy-five per cent of the cities report foreign language work below the ninth grade — only 40 per cent in the case of the two-year systems. Thirty-two per cent of these state that the work accomplished in the seventh and eighth grades is fully the equivalent of that

formerly done in the ninth grade; 18 per cent feel that it is in excess; and the remainder are either uncertain or state that it is less. Nearly all state that modern languages are taught by the direct method and Latin by the indirect.¹

Rodgers' findings. Rodgers' investigation concerned itself with the curricular practices of 101 "junior high schools of all sizes and types" located "in thirty-six states." The results, in so far as they bear on curriculum organization, are summarized in the following table:

CURRICULUM ORGANIZATION OF 101 JUNIOR HIGH SCHOOLS²

NATURE OF CURRICULUM ORGANIZATION	SCHOOLS HAVING GRADES 7-8-9		SCHOOLS HAVING GRADES 7-8		SCHOOLS OF BOTH TYPES	
	Number	Percentage	Number	Percentage	Number	Percentage
General curriculum, all subjects required. . . .	5	7	20	61	25	25
General curriculum with free electives	29	43	12	36	41	40
Differentiated curricula, with no electives	2	3	1	3	3	3
Differentiated curricula with curriculum electives.	26	38			26	26
Differentiated curricula with free electives. . .	6	9			6	6
Total	68	100	33	100	101	100

¹ *Op. cit.*, pp. 148-149.

² Rodgers, J. Harvey, "Junior High School Curricula and Programs." *School Review*, Vol. XXIX, p. 198.

It will be observed that seventy-six, or 75 per cent, of these schools provide for curriculum differentiation of one kind or another. The remaining twenty-five, or 25 per cent, for the most part two-year schools, provide only one general curriculum with all the subjects required. Again, the most popular method of curriculum differentiation is that based on constants with variables, as indicated by the fact that forty-one, or more than 50 per cent, of the seventy-six schools which provide for curriculum differentiation provide for a general curriculum with free electives. The remaining thirty-five, or 49 per cent, provide differentiated curricula on the multiple curriculum basis, for the most part with either curriculum or free electives.

Rodgers' investigation also throws considerable light upon the nature and distribution of constant and variable studies. The table on the facing page shows the distribution of constants and variables in the case of sixty-seven junior high schools.

In discussing this distribution of constants and variables, Rodgers says in part:

1. Constants in the majority of schools in the seventh grade are as follows: English, 100 per cent; arithmetic, 64 per cent; United States history, 67 per cent; political geography, 75 per cent; drawing, 67 per cent; physiology, 50 per cent — much the same program of constants as the ordinary school. Noticeable, however, is general mathematics, 36 per cent.

2. Constants in the eighth grade are predominantly: English, 100 per cent; arithmetic, 45 per cent; United States history, 73 per cent; domestic science or manual training, about 40 per cent; music, 46 per cent; general mathematics, 46 per cent.

3. Constants in the ninth grade cannot be said to include any study except English, though the figures for general science, civics, and algebra are worthy of notice as indicating possible tendencies.

DISTRIBUTION OF CONSTANTS AND VARIABLES IN SIXTY-SEVEN JUNIOR HIGH SCHOOLS COMPRISING GRADES SEVEN, EIGHT, AND NINE ¹

Subjects	CONSTANTS						VARIABLES					
	Grade 7		Grade 8		Grade 9		Grade 7		Grade 8		Grade 9	
	1st half	2d half	1st half	2d half	1st half	2d half	1st half	2d half	1st half	2d half	1st half	2d half
English.....	67	67	67	67	67	67						
Arithmetic.....	43	43	30	28	3	2			2	2	9	9
General mathematics	24	24	19	20	11	11					1	1
United States history	45	45	49	49	2	1			1	1	2	2
Political geography .	52	48	17	15	2	2			2	2	1	1
Domestic science	44	48	29	28	8	8	7	7	17	20	26	27
Manual training ...	45	47	24	24	8	8	8	8	13	16	26	27
Physical training .	48	48	47	47	32	29					1	1
Music.	47	47	31	30	13	13	5	5	10	8	12	12
Drawing.....	45	42	20	19	5	5	7	7	18	16	18	18
Penmanship.....	33	33	18	18	2	2	7	7	1	1	1	1
Physiology	18	18	10	9	2	3					4	4
General science ..	10	10	10	10	14	12					6	6
Spelling	19	19	16	16	5	5						
Sewing.....	15	15	9	9	2	2	1	1	2	2	5	5
Civics.....	9	9	9	9	10	12					6	8
Literature	6	6	4	4		1			1	1	1	1
Latin					2	2	15	15	18	19	34	34
French.....					1	1	16	16	18	18	20	20
Spanish.....					1	1	13	13	19	19	18	18
Bookkeeping			1	1		1	1	1	3	4	4	4
Shop experience.....	7	7	5	5			2	2	4	4	4	4
Vocations.			1	2	3	6					1	1
Algebra			8	7	14	13			2	3	7	7
Mechanical drawing..	2	2	1	1					2	2	2	2
Ancient history..	1	1	1	1	3	3			1	1	9	9
Stenography									2	2	5	5
Typewriting.							6	6	8	8	7	7
Agriculture.....							1	1	2	2	3	3
Physical geography ..					2	2			1	1	2	2

¹ *Op. cit.*, p. 202.

4. Even in the junior high schools of the three-grade type, apparently there is a relative scarcity of variables. For the most part the variables offered are domestic science or manual training, foreign languages, drawing, and music.

5. Of the gross number of variables offered in the seventh grade nearly one half are in foreign languages, 18 per cent in domestic science or manual training, 22 per cent are in music, drawing, or penmanship, and the remaining 10 per cent are scattering.

6. Of the gross number of variables offered in the eighth grade 37 per cent are in foreign languages, 20 per cent in domestic science or manual training, 20 per cent in music, drawing, or penmanship, and the remaining 23 per cent are scattering with some slight emphasis on commercial subjects.

7. Of the gross number of variables offered in the ninth grade 31 per cent are in foreign languages, 22 per cent in domestic science or manual training, 13 per cent in music and drawing, and the remaining 33 per cent are scattering, again with some slight emphasis on commercial subjects.

8. Except for domestic science and manual training, practical arts subjects are far from common in the junior high schools studied. In most schools elective work is practically limited to domestic science or manual training and the foreign languages, with here and there some provision for commercial studies. Ancient history and algebra are more commonly offered than shop work.¹

In addition Rodgers' investigation makes possible a comparison of the constant and variable constituents of curricula organized on the multiple-curriculum basis. The table on the facing page shows the distribution of these constituents — in the case of the academic, commercial, and practical-arts curricula — for the thirty-four three-year junior high schools which organized their curricula on this basis.

In summarizing the facts brought out by this comparison of constants and variables in the case of curricula organized on the multiple curriculum basis, Rodgers says :

¹ *Op. cit.*, pp. 201-203.

DISTRIBUTION OF REQUIRED AND ELECTIVE STUDIES IN THIRTY-FOUR JUNIOR HIGH SCHOOLS COMPRISING GRADES SEVEN, EIGHT, AND NINE WHICH HAVE DIFFERENTIATED CURRICULA¹

SUBJECTS	ACADEMIC CURRICULA			COMMERCIAL CURRICULA			PRACTICAL-ARTS CURRICULA		
	Required		Elective	Required		Elective	Required		Elective
English.....	34	34	34						
Arithmetic.....	12	7	1						
General mathematics ..	22	25	12						
United States history ..	23	30	1						
Political geography. . .	28	10	1						
Domestic science.	26	14	4						
Manual training.....	27	15	4						
Physical training....	31	31	8						
Music	33	27	25						
Drawing.	32	15	10						
Penmanship.....	21	5	4						
Physiology.....	12	4	1						
General science.	12	12	7						
Civics.....	4	17	13						
Spelling.....	8	4							
Latin.....	2	3	8						
French.....									
Spanish.....									
Social study.....	2	2							
Practical arts.....	3	4							
Literature.....	8	2							
Vocation	9	14							
Algebra.....	1	17							
Mechanical drawing....	3	5							
Ancient history.....		4							
Typewriting.....	1	1							
Bookkeeping.....									
Business practice.....	1	1							
Biology.....									
Agriculture.....									
Physics									
Economics									

¹ *Op. cit.*, p. 204.

1. Few significant differences are found between the constants of the three curricula. The most significant apparently are: more arithmetic for pupils in the eighth and ninth grades of the commercial curricula and less general mathematics in the eighth grade of those curricula; more general science in the practical-arts curricula; less algebra in the ninth grade of the commercial curricula; more mechanical drawing in the eighth grade of the commercial and practical-arts curricula, and more mechanical drawing in the ninth grade of the practical-arts curricula.

2. In variables the only significant differences found are: the large amount of foreign language in the academic curricula; the large amount of domestic science and manual training in the academic curricula; the large amount of drawing in the academic curricula; penmanship in the commercial curricula; bookkeeping in the commercial curricula.

3. From the figures given and from other data not readily adapted for presentation in full, it appears clear that the assumed differentiation of curricula exists more in name than in practice.¹

Glass's findings. During the first half of the year 1923 James M. Glass, Director of Junior High Schools of the Pennsylvania State Department of Education, undertook, at the invitation of the Commonwealth Fund, an investigation of the curricular practices of grades five to nine inclusive. Two typical schools in each of fourteen representative city school systems, located in various parts of the country, were singled out for this purpose. Local school authorities co-operated extensively in the undertaking. The investigation covered thirteen subject-fields, each of which was, for purposes of more detailed analysis, further subdivided into main divisions and teaching units. Because of the thoroughness with which it was undertaken, this investigation, although limited to a comparatively small number of centers, affords without question the most authoritative insight

¹ *Op. cit.*, pp. 204-205.

into the present status of curricular practices in junior high schools and in the grades immediately below.

In general, the findings point to a tremendous variation in practice. Not only do the time allotments accorded to the several subject-fields vary greatly from school system to school system, but there is little uniformity in the emphases given to the main divisions of these fields and to the teaching units within the divisions. A well established subject-field like English, for instance, was found to receive more than twice as much time in some systems as in others, and such subdivisions of the field as (a) composition and (b) literature and reading were found to receive even more varying time allotments, those for the former varying in the ratio of more than one to six, and those for the latter in the ratio of one to three.

Constants and variables were found to vary materially from system to system. The same thing was true of the manner in which the core curriculum of the seventh and eighth grades is articulated with the core curriculum of the ninth grade. Only a relatively small number of school systems had in effect a full core curriculum, consisting of health, English, general mathematics, social studies, natural science, and fine and practical arts; and an even smaller number had these subjects organized in a manner representing genuine continuity throughout the three grades, the traditional break between the subject-matter of the eighth grade and the ninth being in most cases still very much in evidence. The variables, or elective studies, varied not only in kind but even more so from the standpoint of the time when they became available and in the manner in which they were articulated with the core curriculum.

However, the findings were not all unfavorable. Under-

neath the seeming chaos there was evidence of genuine progress. Indeed, much of the variation in practice was found to be due to the fact that most centers were engaged in experimentation looking toward a genuine reorganization. Glass characterizes the situation, therefore, as on the whole very promising. Everywhere junior high school teachers were at work in committees trying to reformulate the curriculum. In many cases experts were being invited to coöperate with the members of the faculties in formulating scientific principles as a guide to practice.

General exploratory and survey courses in such fields as mathematics, natural science, social studies, commercial subjects, languages, and practical arts were much in evidence, though they were on the whole as yet poorly integrated. In many subject-fields there was in evidence, too, a decided drift from disciplinary to social emphases and values. In the field of English, for instance, there was in evidence a very decided tendency "to make literature and reading the major divisions" of the course of study; "to increase the time allotment to oral and written composition"; "to change grammar from an end in itself to a means to an end"; and "to reduce the problem of spelling in the junior high school to a determination of the actual needs of junior high school pupils for spelling."

The ultimately desirable junior high school core curriculum was very obviously in the making. English, mathematics, social studies, and health education had been generally incorporated into the core curriculum as constants, and were, therefore, rarely offered as electives. "Natural science and the fine and practical arts" were "steadily being incorporated into the core curriculum, thereby increasing the number of required subjects from the generally

accepted four. . . to six." Finally, there was in evidence a disposition to reorganize the curriculum of the fifth and sixth grades in keeping with the changes which are being effected in the grades immediately above.¹

Curriculum organization in Los Angeles. As indicated earlier, the Los Angeles high-school staff, assisted by Dr. Franklin Bobbitt, has undertaken a thoroughgoing reorganization of curricular practices in junior and senior high schools. In so far as this concerns the selection and arrangement of the materials of instruction, we have already discussed it at some length in an earlier section of this chapter. It remains to be pointed out now that the organization of the courses of study and curricula is being undertaken with the same care as was the selection and initial arrangement of the materials. The task of coördinating the reports of the several committees on courses of study has been largely delegated to a committee of junior and senior high school principals. As an initial step, Dr. Bobbitt was asked to present "an evaluation of the high-school subjects and the relative position which they should occupy in the curriculum."

In this evaluation the following subjects were classed as essentials to be required of all :

Social science	Practical arts
Literature	The allied mathematics
The sciences	Music appreciation
English language	Art appreciation
Physical training and hygiene	

¹ Glass, James M., "Curriculum Practices in the Junior High School and Grades Five and Six." *Supplementary Educational Monographs*, No. 25. The University of Chicago Press, November, 1924.

Other unspecialized subjects not "essential parts of the training of all pupils" but intended as "additional training for pupils of average ability and for pupils of superior intelligence" were classed as "Extras." They were:

Latin	Art technique
Spanish	Literary composition
French	Dramatics
Algebra	Advanced expression
Geometry	Advanced public speaking
Trigonometry	Typewriting (not vocational)
Mechanical drawing	Shorthand (not vocational)
Music technique	

"For additional guidance in the coördination of curriculum recommendations and demands, two series of assumptions were presented, one for the junior high school and one for the senior high school. . . . In the formulation of junior high school courses, the following considerations were given adequate attention. They serve to explain the foundation on which the junior high school program is based. As presented by Dr. Bobbitt and slightly modified in practice, they are" in part as follows:

1. The junior high school should be operated primarily with the assumption that this is a time for general training and not for vocational training.

2. The student who takes the senior high school course, or who takes his vocational training on the senior high school level, should be given only general training in the junior high school.

3. The junior high school will so organize all of its work as to emphasize the general training and as to postpone the vocational training.

4. The general course in the junior high school will be so organized that the most capable students can cover a wider field and go farther

than the average student ; and the average student can likewise cover more ground than the more backward students.

5. In the general course of the junior high school there will be basic training in social studies, literature, English language, science, hygiene, physical training, art, and music, which will be much the same for all except that the brighter students will go farther and will achieve higher standards.

6. There can be no fixed boundaries within which the general training certainly lies ; nor any fixed upper limit at which it ends. Students who can be encouraged to do so should push outward and upward as fully and as far as they can be constrained to go — so long as their program is properly balanced.

7. In the basic training there will be no electives.

8. Each major line of the basic training should be continuous throughout the junior high school.

9. Beyond the basic general training program of the junior high school, there should be certain electives for those who desire to work out along special lines : foreign language, algebra, geometry, art for skill, music for skill, typewriting, dramatic plays, literary technique, and so forth.

10. The optional studies in the junior high school should be additional to those of the basic course and should not be permitted to displace any portion of the basic training.

11. Neither parents nor pupils are now qualified to choose the subjects which should make up the basic general training. Those who are specialists in education — namely, teachers and supervisory staff — are the ones who should make decisions. Electives then should not be permitted to set aside their decisions.

12. The offering of sufficiently numerous electives, in addition to the basic course, will give all desirable freedom of spontaneous choices to those in position to utilize such opportunities.

13. The achievement of a desirable level of proficiency in all of the needed basic training should be prerequisite to the choice of any of the extra or elective studies.

14. Failure on the part of any student carrying extra subjects to maintain proper standards in the basic subjects should result in his dropping extra subjects until he has brought his basic training again up to proper standards.

15. The basic subjects must have priority over the electives because of their greater importance in our general human affairs.

16. The students of sub-average natural capacity will give their whole time and energy to achieving the highest practical standards in the basic subjects; they will not undertake any of the extras.

17. Students of average or near average capacity will need most of their time and energy for achieving sufficiently high standards in the basic subjects. Except when exceptionally industrious and ambitious they will undertake few or none of the electives.

18. For students of large natural capacity the program of training in the basic subjects, on the junior high school level, will be so widened and extended that they will have only a minor portion of their time for electives. They are the ones, however, by whom the electives will in the main be taken.

19. Where a student finds it desirable to secure vocational training on the junior high school level, he will take none of the general electives. His vocational course will be all that he will take in addition to the basic training course.

20. The vocational training which can actually be given upon the junior high school level must be training for a juvenile occupation or the juvenile level of an adult occupation. Nothing more than a relatively brief vocational course is therefore warranted.

21. Where a student leaving school prematurely finds it advisable to take a juvenile vocational training course in the ninth grade, his general training should continue to the latest practicable moment before the vocational training is entered upon.

22. Since courses for different juvenile vocations will vary from four weeks to a year in length, it will greatly facilitate the administration of such courses if when once entered upon they receive the entire time of the class for intensive training in the vocation. Rational administration otherwise is practically impossible.

23. Students prematurely leaving the high school for a juvenile vocation will continue their general training for the entire time up to the point where they enter upon their vocational training. At this point they will drop all the general training and devote the entire time to the intensive vocational training. For certain juvenile vocations the loss of general training time may then be not more than four weeks; and usually not more than a semester.

24. Where there is specialization there is the presumption that it is the vocational specialization.

25. In the basic training of the junior high school there should be a minimum of departmentalization. Any given pupil should have as few different teachers as practicable.

26. The electives or extra portions of the general training may be completely departmentalized.

27. Placing the training for any given vocation in the hands of any single vocational teacher is a means of enforcing responsibility and efficiency in the administration of the course.¹

As far as the actual organization of curricula is concerned, the Los Angeles committee has for the time being adopted the multiple-curriculum plan. The administration of the plan is so flexible, however, that it affords practically all the freedom of the constants-with-variables plan. Beginning with the eighth grade, six basic curricula are available, namely: scientific, mechanic arts, home economics, commercial, literary, and general elective. In the seventh grade the work is much the same for all. The committee says in part:

A uniform course consisting largely of work in the usual fundamentals is offered to all seventh-grade pupils. Some variety is introduced in the shape of short-unit or try-out courses in practical arts and other lines. Throughout the seventh grade an effort is made to determine the peculiar bent of the individual with reference to the selection of a course of study for the ensuing two years. While the six courses . . . differ in some essentials, these differences are not great enough to preclude changing from one to another with but slight loss of time, if later developments show the wisdom of such change.²

Outstanding features of current curricular practices. We may now briefly summarize what appear to be the outstand-

¹ Board of Education, Los Angeles City High Schools, *Course of Study Monographs*, No. 22, pp. 17-22.

² Board of Education, *Course of Study, Junior High Schools*, 1924-1925.

ing features of current curricular practices in junior high schools. These may be conveniently grouped under the following heads: (1) curriculum organization and administration, (2) the nature and distribution of constants and variables, and (3) the reorganization of the materials of instruction.

Curriculum organization and administration. In no other respect have junior high school curricular practices advanced so far as in the matter of curriculum organization and administration. Fully three fourths of the schools — or, if we confine ourselves to the three-year institutions, more than nine tenths of the schools — are providing for curriculum differentiation in one way or another. There is, moreover, little or no indication of sharp or rigid differentiation. Where the multiple-curriculum plan is in operation, it appears to be an administrative device more than anything else, rarely opposed to flexibility in curriculum administration. The majority of the schools organize their curricula on the constants-with-variables basis. This is doubtless the most desirable method, especially when supplemented with an ample group of suggestive curricula to emphasize and clarify in the minds of parents and pupils the functions inherent in the program of studies.

Beyond this, differentiation is in most cases introduced rather gradually and experimentally. A considerable number of schools provide little or no differentiation in the seventh grade and very limited differentiation in the eighth grade, on the assumption that the experimental determination of sound lines of differentiation must of necessity require considerable time.

The nature and distribution of constants and variables. Much less progress has been made in the selection of suitable

constant and variable materials of instruction than in the matter of curriculum organization and administration, doubtless in large part because of the greater complexity of the problem. English is the only 100 per cent constant in any of the three grades. United States history comes next, being approximately two thirds constant in the seventh and eighth grades. Beyond this, arithmetic, domestic science or manual training, drawing, music, and political geography — all traditional elementary-school subjects — are from two thirds to three fourths constant in the seventh grade. The variables for all grades are entirely inadequate, and in most cases altogether too traditional. If this represented the real situation, it would be a sad commentary on the junior high school program of studies.

The fact of the matter is, however, that the whole program of studies is in process of reorganization. It is, therefore, extremely difficult to picture the situation as it actually is. On the whole the trend is doubtless in the right direction. The distinction between constant and variable materials is coming to be definitely recognized. Moreover, educators are everywhere turning their attention from the teaching of subject-matter as such to the achievement of definite educational objectives — a fact which is bound to exert a tremendous influence upon the selection of suitable constant and variable materials.

The reorganization of the materials of instruction. The principle that the materials of instruction should be reorganized on a thoroughly scientific basis in keeping with the needs and interests of children of junior high school age has been generally accepted in theory. Its incorporation in actual practice, as might be expected, is taking place much more slowly. Nevertheless, there is evidence of progress.

A vast amount of useless material has already been replaced by a genuinely functional content. This represents obviously a fundamental step in the right direction. In the organization of the materials of instruction in terms of the needs and interests of early adolescents, much less progress has been made. Isolated subjects are still very conspicuous in the junior high school program of studies, and general courses representing the major fields of human endeavor are too little in evidence. The organization of general courses is without question one of the most difficult and one of the most important problems of junior high school program-making. It is doubtless the one basic problem toward the solution of which we have made the least progress.

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CHAPTER VII

EXTRA-CURRICULAR ACTIVITIES

STATUS OF EXTRA-CURRICULAR ACTIVITIES

Relation between the curricular and the extra-curricular. The time will doubtless come, and probably much sooner than many anticipate, when there will be no occasion for a separate chapter on extra-curricular activities in a book of this kind. From the standpoint of the new education, which makes it the primary concern of the school to develop necessary and desirable forms of human behavior rather than to transmit subject-matter, there can be no valid distinction between the curricular and the extra-curricular; all activities and experiences which make up the educational environment commonly designated as the school must be judged solely in the light of their efficacy to produce necessary and desirable forms of human behavior. As fast as this new education comes to be accepted in practice, the distinction between the curricular and the extra-curricular may, therefore, be expected to disappear.

It is a fundamental thesis of this chapter that the activities which are commonly designated as extra-curricular, and many others which have not yet been accorded even that honor, are educative in the sense that they develop necessary and desirable forms of human behavior — indeed, in many cases much more so than the activities traditionally designated as curricular.

Earlier attitude toward extra-curricular activities. As a matter of fact the activities which are now generally designated as extra-curricular are only just beginning to come into their own. Until quite recently such activities, in so far as they gained an entrance to the school at all, were in most cases tolerated rather than welcomed. They were looked upon as necessary evils. That they might be paramount educational agencies occurred only to the more far-sighted here and there. As one writer puts it, many were firmly convinced that "when the literary society came in the door, scholarship flew out the window." The attitude toward the literary society, one of the earliest extra-curricular activities, is typical of the earlier attitude of school authorities toward all extra-curricular activities — social, athletic, musical, journalistic, and governmental. A recent writer, in speaking of the early attitude toward social activities, says :

There seemed to be no need for supervising the social activities of high-school pupils. The majority of the school authorities avoided, as far as possible, responsibility for the pupils' social life. It was considered a problem of the home, and concerned the school only when social activities interfered with school work. In some schools social organizations were actually forbidden; in others they were regarded as a necessary evil, tolerated merely in order to keep the pupils pacified.¹

Recent changes in attitude toward extra-curricular activities. More recently there have been marked changes in attitude toward extra-curricular activities. There has been a growing conviction on every hand that such activities have great educational possibilities, and that it is the busi-

¹ Pound, Olivia, "The Social Life of High-School Girls." *School Review*, Vol. XXVIII, p. 50.

ness of the school not only to welcome and encourage them but to control and direct them in such a manner that they may be utilized educationally to the fullest possible extent. A recent writer characterizes the situation in part as follows :

If the curricular activities of the secondary schools have developed far beyond the limited courses of a half century ago into the rich curricula of today, the extra-curricular activities have evolved in an even more striking degree from practically nothing a few years ago to an almost bewildering multiplicity of athletic, intellectual, social, industrial, artistic, and what-not pursuits of the present time. If revised methods are necessary to conduct successfully the broadened curricular activities, so also are some studied methods necessary to conduct successfully the ever increasing extra-curricular activities. A heavy responsibility is laid on the school for what goes on outside of the classroom — a responsibility ranking close in importance to that which must be met for the activities inside of the classroom. Who knows whether more effective citizenship training is found in the classroom or out? Surely the extra-curricular activities, if properly conducted, furnish an excellent laboratory for the development of social skills. The problem of finding suitable methods for administering this other half of the school's business is indeed a serious one.¹

Significance of the extra-curricular movement. From what has been said thus far it is evident that the extra-curricular movement represents an important step in scientific curriculum-making. Its significance lies in the fact that it makes available for educational purposes a great variety of pupil activities and pupil experiences which were formerly almost entirely overlooked. To be sure, it makes them available in a rather indirect and clandestine manner, since they are being admitted rather quietly and apologetically through the back door. But this is a minor consideration,

¹ Hobson, Cloy S., "An Experiment in Organization and Administration of High-School Extra-curricular Activities." *School Review*, Vol. XXXI, p. 116.

a mere incident in the evolution of sounder educational practices. The all-important consideration is the fact that these activities are becoming increasingly indispensable to the up-to-date educational household. It can no longer do without them, nor does it in most cases care to. The next step must inevitably accord full curricular dignity to these activities. This will of course greatly enhance their effectiveness, since it will assure them time allotments and supervision commensurate with their importance.

EXTRA-CURRICULAR ACTIVITIES IN THE JUNIOR HIGH SCHOOL

Relationship between extra-curricular activities of junior and senior high schools. Extra-curricular activities in junior high schools will necessarily cover much the same ground as they do in senior high schools. Each of these institutions concerns itself primarily with adolescents who have much in common from the standpoint of needs and interests. The pupils of the senior high school are of course older and more mature than those of the junior high school. This being the case, they ought to be able to carry out more complex and more sustained extra-curricular projects, and they ought to be able to do this far more independently than junior high school pupils. As a matter of fact, the extra-curricular programs of junior and senior high schools ought to constitute a continuous scheme. Such a scheme should grow more complex from year to year and it should call for greater initiative and increased responsibility as pupils grow older and more mature. The senior high school ought, therefore, to build upon the foundation prepared by the junior high school a far more elaborate extra-curricular structure than that ordinarily found in junior high schools.

In actual practice there are at present many exceptions. This is particularly true when junior high schools are compared with traditional four-year high schools. Indeed, many junior high schools support extra-curricular programs which are far more elaborate than those ordinarily found in four-year institutions. The fact of the matter is that the junior high school has torn away from tradition sufficiently to see the possibilities of the situation. It is not only free to initiate and to try out new practices, but is eager and anxious to do so. This accounts in no small part for the progress which it has made and the success which it has achieved in connection with extra-curricular activities.

Types of extra-curricular activities for junior high schools. As indicated above, junior and senior high-school pupils have much in common from the standpoint of needs and interests, since both are for the most part adolescents. One would, then, expect to find much the same types of extra-curricular activities in progressive junior and senior high schools; and such is actually the case. In general these activities may be grouped under the following heads: (1) pupil-participation in school government, (2) class organizations, (3) clubs, (4) publications, (5) the assembly, (6) athletic activities, (7) musical activities, and (8) social activities. We shall discuss these in the order in which they appear.

PUPIL PARTICIPATION IN SCHOOL GOVERNMENT

Pupil participation in school government as the basic extra-curricular activity. While it is not our purpose at this point to pass upon the relative merits of the several types of extra-curricular activities, it will not be amiss to stress the fact that pupil participation in school government constitutes by

far the most basic and the most significant extra-curricular activity in a secondary school. This is due in part to the fact that it conditions to a very considerable extent the success of all other extra-curricular activities. More largely, however, it is due to the fact that it contributes far more than any other agency to genuine training for citizenship in a democracy. Fortunately, this is being increasingly recognized by leading educators throughout the country. In discussing this aspect of the secondary-school life in Philadelphia, Fretwell says :

Participation under a democratic régime in the government of the school and in the organization of its informal social and club life gives pupils an opportunity to develop those civic ideals and practices that are characteristic of democracy ; whereas non-participation under an autocratic régime develops in pupils either an unthinking submission to, or an habitual evasion of, authority that is characteristic of an autocracy. Pupils in a democratized school learn how to get along with their fellows under conditions similar to those existing in the life of any community. In other words, a democratic organization and administration of the activities of school life recognizes that the life of a public high school is simply a cross-section of the life of the community and as such presents civic problems that are inescapable and for the same reason opportunities for civic training that are unequalled.¹

Pickell, speaking from the standpoint of the administrator with prolonged experience and deep insight, says :

Student participation in school government and in the solution of many of the problems of the student body is one means of training for the assumption of the duties and responsibilities of adult society. Student participation will help develop obedience to and respect for our laws and customs ; it will help foster the spirit of fair play and

¹ *Report of the Survey of the Public Schools of Philadelphia*. Vol. IV, p. 114.

unselfish service. In short, it will help build up the strength of character and self-control essential alike to a high type of school spirit and of real citizenship. After all, school spirit, whatever it is, and community spirit are but different aspects of the same thing. The one is just as genuinely a social factor as the other, with the same laws of society operating in practically the same way in both instances. The factors of control are much the same. Autocratic methods are resented as keenly in the one instance as the other. Injustice, partiality, and laxness in administration lead to the same inevitable ends in both cases. Brute force gets just about as far in the genuine conversion of the high-school lad as it does with his father. Self-control, respect for the rights of others, and real obedience to the mandates of the group must spring largely from within. Suppression is a thing of last resort. Therefore, if in the school we are to train for positive, upstanding citizenship in the community, we must place some responsibility upon high-school boys and girls for the solution of their school citizenship problems. In other words, we must provide for the training of citizenship through practice.

Student participation in school control is fundamental because of the inherent premium which democracy places upon the integrity of the action of the individual who thinks and wilfully acts with due consideration to those about him. It is fundamental because it implies coöperation.¹

Past failures and their causes. In spite of its fundamental and basic character and its educational significance, pupil participation in school government has many apparent failures to its account. The causes for these are not far to seek. In the first place, school authorities have too often viewed pupil participation in school government in the wrong light. They have been too prone to look upon it as a method of school government which must stand or fall on its merits. If it made the school machinery run more smoothly than government on the part of the principal and

¹ Pickell, F. G., "Training for Citizenship through Practice." *School Review*, Vol. XXVIII, pp. 519-521.

he faculty, it was considered a success; if it gave rise to bolts here and there and raised unexpected problems, as it often did, it was apt to be characterized as a failure. Its possibilities as a paramount educational agency, to be wielded and directed by the principal and the faculty toward preparation for citizenship in a democracy, were all too frequently entirely overlooked. Beyond this, school authorities have been too prone to overlook the fact that it has taken the human race centuries to work out a measure of democracy and that skill along any line comes usually only in response to prolonged and directed practice. In consequence they have been disposed to introduce pupil participation in school government too suddenly and on too pretentious scales. Under these circumstances failure was in many cases quite inevitable.

The remedy. The remedy for this situation must obviously be found in a sounder point of view and in a more practical procedure. That successful educators throughout the country are actually attacking the problem in this manner is evidenced by recent statements of underlying principles and by reports of successful experiments in introducing effective schemes of pupil participation in school government. The following are typical.

Miss Kerr's point of view. In discussing the problem of pupil participation in school government in a recent article, Miss Kerr says :

First of all, we must make up our minds that student government will never completely justify itself anywhere as an administrative system. If our ends in the government of students are order, efficiency, smooth machinery, just, wise, and even administration, we had better not place our faith and dependence on student government. My own belief in it is founded on its value as an educator. Not

government but the student is the center of our thought. Student government is not an end but a process. Social efficiency can be produced only by participation in the activities of a society. . . .

If student government is a stronger force than faculty government for making our students grow in responsibility, social-mindedness, and citizenship, it has to my mind fully justified itself.

The second principle I would emphasize is that student government does not imply turning the entire government of the institution over to students. The best conditions in modern family life come from coöperation between older and younger members, parents and children; so also must faculty and students coöperate if we are to have the best conditions of government and community life for all. The younger members of the group need the experience and guidance of the older members, and the older need the energy and enthusiasm of the younger. Neither pure faculty nor pure student government works well today, but the government which combines the activities and interests of both.¹

Smith's point of view. Principal Smith, who has repeatedly put into operation successful plans of pupil participation in school government in secondary schools, says :

First of all there must be a period of education up to civic consciousness through the civics classes and those of allied subjects such as history and English. This is an advertising campaign. The students must be induced to think. They will not wish to think. Man never has, but it has been good for him, nevertheless, and it will be good for these students and for their fathers and mothers. This period of education may extend over a few months or over two or three years. The length of time will depend upon local conditions, and also upon the vigor with which the campaign is pushed. After this period of education will come the period of organization. In a school of eighteen hundred this will take on a different form from that which I described as having been used in the smaller schools. That was more like the town meeting. This will be more like the house of burgesses.²

¹ *N. E. A. Addresses and Proceedings*, 1920, pp. 358-359.

² *Education*, Vol. XXXVIII, p. 375.

Jones's experience at Walla Walla, Washington. Principal Jones, who introduced an effective plan of pupil participation in school government in the Walla Walla High School and directed its operation over a period of years, gives the following account of the steps which were taken in getting the plan under way :

The first step taken in conducting this experiment was to bring about among the members of the faculty a spirit of sympathy and confidence in the plan.

Then followed a period of readjustment of creeds, ideals, or standards among the teachers. This was brought about by a careful study of the problem by the principal and teachers and a series of discussions that brought out the necessary part a teacher must play in such a plan of government. It was decided to be absolutely necessary that the teachers be teachers of boys and girls; leaders of boys and girls, not drivers; that the teachers should consider their particular subjects secondary in importance to the pupil and that the principal excuse for teaching the subject is to give them an opportunity to develop ideals and principles of character that will enable the student to function successfully in maturity as an individual and as a citizen.

The next step was an advertising campaign to acquaint the pupils with the purposes, plans, and requirements of self-government. This was carried on throughout the whole school at once. Occasional discussions were held in the classes at recitation periods. The entire field was carefully covered in assembly talks. The expression and debate classes took up the theme and put on several student assemblies which brought out the various phases of both sides of the question. Gradually the feeling in favor of student coöperation grew into a demand which was accompanied by an understanding of the full responsibilities and necessary labors such an undertaking would entail.¹

Present status of movement. Recent investigations throw considerable light upon the extent to which secondary

¹ *School and Society*, Vol. XIII, pp. 252-253.

schools have in actual practice put into effect plans designed to give pupils an opportunity to participate in school government. In the case of the traditional four-year high schools the results are rather discouraging, at least outside of the larger and more progressive communities. Those concerning junior high schools are on the whole very encouraging.

Findings among North Central Association schools. A recent investigation concerning 1,080 high schools accredited with the North Central Association brought out the fact that only 28.3 per cent of these schools had "some form of partial or complete student government, and only 22.4 per cent had formal machinery for the operation of the plan."

Archer's findings in Iowa. More recently Archer directed a questionnaire to a group of high-school principals assembled in a sectional conference at the Iowa State Teachers' Association. Definite replies were received from sixty-two out of approximately one hundred schools represented at the conference. He summarizes the results as follows:

These data show that only 21 per cent of these schools have student councils. Fourteen and five-tenths per cent of the schools have some other form of organization. Twenty-two, or 35.5 per cent, of the sixty-two schools have a student council or some form of organization which tends to fulfill the same functions. We see that a great many of our schools are not attempting any kind of self-government. Many of those which are attempting it do not appear to be giving very much authority to the councils and are not very democratic. We notice that all of the schools in cities with a population of over twenty thousand have student councils, yet they direct only a part of the activities. In one of the schools even class officers are not elected by the students, and in none of the schools of this group are the classes permitted to select their own sponsors.¹

¹ *School Review*, Vol. XXXI, p. 433.

Contrasting points of view as revealed by Miss Pound's investigation. Several years ago Miss Olivia Pound sent a questionnaire to a number of the larger high schools in various parts of the country. She was especially interested in learning the points of view of school authorities regarding the feasibility of pupil participation in school government. The returns indicated clearly that these varied tremendously. She summarizes them as follows:

There is a wide difference in opinion among school authorities in regard to the advisability of student participation in the management of the school. Twenty-three administrators seemed to have no definite opinion on the subject. Others seemed to confuse the project with student self-government, or were opposed to it altogether, as the following comment will show:

"Students should study and recite, teachers should *teach* and supervise"; "Students should not have a direct voice in governing their fellow students"; "First- and second-year students are incapable of self-government, and juniors are little better. I think seniors need to be backed up by a pretty definite set of restrictions"; "There should be no student participation in the government of the school. *A school must be a benevolent despotism*"; "There should be no student participation absolutely, except as school spirit and respect for proper authority may assist."

On the other hand, many school men are enthusiastic over the possibilities arising from student participation in the management of the school. The following quotations will give the view of some of them: "It is ideal in my opinion"; "They should participate just so far as they will go. If they succeed they have other things added unto them"; "They should participate to a considerable extent. To be trusted is to be saved. Children should get in the habit of taking responsibility"; "They should be allowed as much freedom as tends to develop respect for law and order, with a large spirit of coöperation with the faculty"; "Student participation is valuable toward bringing the pupil's mind to a realization of what education and its implements mean to good citizenship."¹

¹ *School Review*, Vol. XXVII, p. 166.

Status of pupil participation in school government in junior high schools. Pupil participation in school government is so essential a part of junior high school procedure that few institutions which merit the name junior high school fail to provide for it in some form or other. There are of course exceptions, but these are rare. The vast majority of progressive junior high school leaders not only believe in pupil participation in school government, but they are busily engaged in putting it into operation. A few typical examples will serve to illustrate what is actually being done.

The scheme in operation at the Ben Blewett Junior High School of St. Louis. Lyman characterizes the scheme for pupil participation in school government as found at the Ben Blewett Junior High School of St. Louis as follows:

By means of a school constitution provision is made for an elaborate organization of self-government on the part of pupils. Beginning with room groups, or "advisory" groups as they are called, each chooses its own name and motto. . . . Each selects a varying number of officers, a president, secretary, treasurer, thrift-stamp treasurer, reporter to *Junior Life*, the school paper, and sergeant-at-arms. These officers are charged with the general business and discipline of their room. Administrations, usually permanent for a year, may change at irregular intervals as occasion requires. The room organization is then the democratic unit upon which the government of the school rests. It is a town-meeting form of control.

A school constitution prescribes the higher order of government, each room electing two congressmen, a boy and a girl, to the student congress, there being one congress for each grade under the supervision of the faculty grade administrator. Congresses meet at the call of the administrator and consider matters pertaining to student government, student interest, or other needs of the school. Congressmen report to their advisory groups such action as may be taken.

The School Cabinet is a smaller body made up of the principal,

assistant principal, the three grade administrators, one teacher from each grade chosen by the principal, one boy and one girl elected by each grade congress, and student delegates from the school paper, *Junior Life*, from the Blewett "B" Council, and from certain athletic, civic, and music clubs.

The passing of classes is supervised by corridor officers, selected from the boys of the school, who are given military rank from captain down, and who constantly wear large buttons indicating their rank and office. Such officers are in charge of a teacher who is relieved of teaching one class. They direct all traffic in the building, assist in discipline at auditorium session, taking their position in conspicuous places, and maintain order at athletic contests on the playground. A few girls are on duty at the girls' locker-rooms.¹

The scheme in operation at the Washington Junior High School of Rochester, New York. In describing the scheme for pupil participation in school government at the Washington Junior High School of Rochester, New York, Lyman says:

In fifty-two rooms as the group units is found the core of the democratic organization. Radiating out from the room units of about thirty-five pupils, each with its own varied governmental and social activities, run the various lines both of faculty and of student organization which culminate in and constitute the school community. . . .

The home room is indeed the primary agency through which a very large share in social control is placed squarely in the hands of the pupils themselves. . . . It is in charge of student officers elected by semesters in town meeting, and under the supervision of the home-room teacher or counselor. . . .

Each room has five officers. The room president is class leader, the presiding officer at all class meetings, the teacher's proxy during her absence, and the agent for library campaigns and other school enterprises. The vice-president is business manager of all home-room activities and as the "safety first" representative inspects and remedies menaces to sanitation and health. The secretary-treasurer is in

¹ *School Review*, Vol. XXVIII, pp. 31-32.

charge of school reports and all communications with the office, is custodian of class funds, and is in charge of savings accounts and thrift stamps. The usher is a reception committee of one to receive visitors and to escort them through the building. He also leads his group in passing through the corridors, being required on his own ingenuity to extricate them from corridor congestion. The deputy is in charge of group discipline, dismissing the class and maintaining the order of this group in the corridor.

In speaking of the five executive councils which are "made up respectively of the corresponding room officers," he says :

Each of these councils is in general charge of a faculty adviser chosen because of his special fitness for the task. With the council of presidents the principal of the school and the librarian are in close touch. The former uses the group presidents in matters pertaining to general school morale, while the librarian uses them to advertise the school library. . . .

The faculty director of the council of vice-presidents is the school health officer. Under his guidance this council makes monthly inspection of the entire school plant for fire hazards and unsanitary conditions. The council of secretary-treasurers, under the direction of the school treasurer, is responsible for originating and managing various campaigns for thrift and saving.

In the council of ushers is given training in courtesy and good manners which is carried over by the usher officers to the home rooms. From this council the school ushers are selected to guide visitors through the school — a service which is intelligently rendered by carefully selected and trained ushers. The council of deputies initiates campaigns for perfect records in attendance and promptness. . . .

To be noted here is the fact that all five of the councils have regular meetings once a month with their respective faculty advisers. Such meetings are conducted strictly under parliamentary usage. If any home-room section has instituted an interesting innovation, the officer representative may pass it on to his colleagues from other rooms. In this way the various representatives become mutually helpful. They

are encouraged also to initiate movements within their own respective fields, as well as to become agents within their own groups for the policies suggested by their faculty leader.

Regarding the school community committees, a third set of student organizations, he says :

Several school community committees selected by the faculty directors of the committees aid in maintaining discipline. A luncheon committee has entire charge of the cafeteria, caring for dishes, taking payments, acting as cashiers. A committee of messengers is so organized that a notice from the office can be distributed to fifty-two rooms in five minutes; a marshal's committee polices the building to guard against petty thefts in cloakrooms. The members of this committee are not known to their comrades. Finally, a committee of twenty deputies is in charge of the student body coming in and leaving the building; these act as traffic officers, directing in the halls the class ushers and deputies.¹

The machinery for pupil participation in school government. There is little agreement regarding the most suitable machinery for pupil participation in school government. Some contend that the machinery should be very simple. Others maintain that better results may be obtained through a fairly elaborate organization. In actual practice the machinery varies greatly in the case of both junior and senior high schools, ranging from the severely simple to the rather elaborate. On the whole those schools which have gone farthest in giving pupils an opportunity to participate in the government of the school have also the most elaborate machinery. Such machinery is, however, rarely really complex from the standpoint of the citizens of the school community, though it may at first sight impress the outsider as rather complicated.

The fact of the matter is that the different points of view

¹ *School Review*, Vol. XXVIII, pp. 197-202.

regarding the character of a suitable machinery for pupil participation in school government are in part at least called forth by different conceptions of the function of pupil participation in school government. Those who look upon pupil participation in school government as a substitute for faculty control, or, as Fretwell puts it, as "just another way of getting things done," will obviously want a machinery which is at once very simple and highly centralized. There can be no doubt that this will serve their purposes best. On the other hand those who view pupil participation in school government as one of the most potent agencies for socialization and for effective training in citizenship will in the very nature of the case look upon simplicity as a secondary consideration, and centralization they will avoid rather studiously since it tends to restrict participation to the few. What they want above all is a machinery which will afford every pupil an opportunity to take a genuine part in the government and the affairs of the school. Such machinery is often of necessity rather elaborate, though never really complicated.

There are those, moreover, and there is much to support their point of view, who believe that there is no more effective method of familiarizing the future citizen with the governmental machinery of the city, the state, and the nation than through the machinery for pupil participation in school government. The fact of the matter is, and we may as well face it frankly, that the average high-school graduate's acquaintance with these fundamental forms of government is limited largely to words. Nor is he to be blamed for this. Definite concepts come only through experience. And discussion alone supplies inadequate experience. Participation in some form or other is indispensable.

There are, therefore, probably the very best of reasons why the school city and the school republic should be utilized in whole or in part as machinery for pupil participation in school government. A school system might well work out a progressive scheme which would provide for the simpler types of experiences in the junior high school and for the more elaborate ones in the senior high school. The stock objection to such a proposal is of course that it requires intelligent and enthusiastic leadership and that it will cost time and money. This is obviously no objection at all, since the same thing is equally true of all other definite school activities. If a fairly elaborate scheme for pupil participation is eminently worth while educationally, why not employ an expert to direct it just as we employ teachers to direct the activities of the various departments?

Progressive schemes in operation in Los Angeles junior and senior high schools. Most of the junior and senior high schools of Los Angeles have worked out fairly elaborate schemes for pupil participation in school government. In most cases the plans in operation in the junior high schools resemble those found in the senior high schools. The chief difference lies in the fact that the former are as a rule much simpler. On the whole there is in evidence a distinct tendency to work out progressive and sequentially related schemes for the two types of institutions.

The machinery itself consists at base almost without exception of the customary student body organization with the usual officers elected semiannually by popular vote. Then there is ordinarily a council the functions of which are largely legislative. This is made up in various ways. At Manual Arts High School it consists of the principal of the school, the officers and ex-presidents of the student body

organization, a representative elected by the teachers, and the presidents of the several classrooms. At the Hollenbeck Junior High School it consists of the president and the two vice-presidents of the student body organization and of the chairmen of the boys' and girls' self-government committees.

There is usually also a financial body of one kind or another. This controls the financial affairs of the school, as a rule under faculty supervision.

Beyond this, there are the pupil self-government committees, one for girls and one for boys. These represent the several classrooms. In the case of the junior high schools they are most commonly made up of one representative from each seventh-grade room, two representatives from each eighth-grade room, and three representatives from each ninth-grade room. These committees are usually well organized and have rather definite functions to perform. At Manual Arts High School the president of each committee appoints a prosecuting attorney and a defense attorney. There is also provision for trial by jury. At the Hollenbeck Junior High School each committee has under it several divisions charged with special pupil self-government functions. There is also provision for trial by jury. The actual powers of the pupil self-government committees vary from school to school. In general these powers are constantly being extended in keeping with the growing abilities of the pupils.

The Los Angeles plans for pupil participation in school government have been in operation for a considerable period of years. The movement received its original impetus under Francis. Because of his implicit confidence and unbounded faith in boys and girls, he succeeded where others

would have failed. Once the practicability of the movement had been demonstrated, it spread rapidly from school to school. In consequence, pupil participation in school government is today, although still in process of elaboration, anything but a passing fad. Teachers and principals who have given the plan a fair trial are without exception enthusiastic about it.

CLASS ORGANIZATIONS

In actual practice, class organizations embracing all the pupils of a given semester or year play a very slight part in the extra-curricular life of most secondary schools. They are almost completely overshadowed by the smaller home-room class organizations. Indeed, in many student body constitutions the larger class organizations are not even mentioned. In large part this is doubtless due to the fact that they are more difficult to administer than the relatively small home-room bodies.

This is not altogether as it should be. The fact that the larger class units present certain administrative difficulties constitutes from an educational point of view no valid objection against them. The adolescent, like the adult, acquires skill only as he overcomes difficulties. Moreover, these intermediate organizations, standing as they do between the small home-room units and the large student body organization, are needed in the extra-curricular scheme of things. They have very definite functions to perform. Especially are they needed to create a larger group consciousness and greater social solidarity. The home rooms contribute to this, but they are more or less on the tribal level, and the adolescent must get beyond this. The real object is obviously a genuine all-school consciousness.

Class organizations will do much to bridge the rather formidable gulf between the small home-room organizations and the student body organization. They will also give pupils an opportunity to try out on a larger scale the co-operative enterprises undertaken in the home rooms and prepare them for effective participation in the affairs of the whole school. When properly directed they should facilitate pupil participation in school government and the administration of extra-curricular activities.

In speaking of the manner in which these larger class organizations may be effected, Fretwell says :

The organization of any class may be worked out in several ways. According to one way the divisions of a class in their home rooms elect two representatives each. These division, or home-room, representatives meet the representatives of all the other divisions of the same class. These representatives express their constituents' and their own opinions. These division representatives of a class may be called the "Freshman House," for example, or any other of a dozen names. This "House" may nominate a group of boys for each office. The faculty may determine whether these boys are eligible to hold office according to some plan definitely known by all, and the whole class may then meet as a whole to hear the merits of each candidate presented. Each home room has its faculty adviser, and the class as a whole has its adviser; but when it comes to selecting the one of his peers whom he will follow as a leader, the individual member of the class must do his own voting. He must lead or pick his leader; and when leaders are once chosen, the class must of necessity coöperate or be defeated by other classes. This is the way a democracy works, and the members of a class are anxious to work successfully. Their advisers help them. This is too great an educational opportunity to be missed. To accomplish the end here set forth, many schools have wisely had a home-room period of fifteen to thirty minutes daily for accomplishing these ends.

For the organization of the whole school, each class may follow the plan just presented. These class "Houses" may elect representa-

tives to a "Senate." Representatives of special phases of the school's activities may also be elected to the "Senate." Then the class senators and the "special" senators together with a certain number of teachers, usually appointed by the principal, compose the "Senate." There is no need for any great machinery, but there must be some. The success of such a scheme depends largely on the home rooms being active in forming public opinion themselves and seeing that their representatives actually represent them. A sure way to kill such a scheme is for opinion to be handed down from above.

Such an organization . . . has work awaiting it. School opens in September — officers are to be elected, clubs to be organized, athletic teams to be developed and supported, assembly programs to be arranged, newspapers or magazines to be edited, traffic regulations to be made and enforced, school spirit to be developed, and, win or lose, clean sportsmanship to be maintained.¹

CLUBS

No other extra-curricular activity of our secondary schools has enjoyed such phenomenal and wholesome growth in recent years as its club life. Various factors are responsible for this. In the first place, an intelligent study of adolescence has done much to convince teachers and parents that the desire to participate in organized group activities, a desire too often stifled or allowed to go wild in the past, represents a perfectly natural and wholesome reaction on the part of the adolescent, and that it harbors wonderful educational possibilities when properly encouraged and directed. They have come to realize that this desire when directed into right channels will result in the development of personality and character and that it will contribute greatly to genuine socialization. They have come to realize, too, that its suppression must inevitably terminate in stunted individual and social development, and that any disposition

¹ *Baltimore School Survey*, Vol. III, pp. 108-109.

to ignore it is bound to give rise to spurious and unwholesome organizations and practices.

In discussing club activities from the standpoint of high-school girls, Miss Romiett Stevens says :

One characteristic of high-school girls is their desire to form into groups of congenial spirits. This they *will* do. If the instinct is undirected they tend to form groups, open or secret, with no worthy basis of membership. Recognizing the need for these social group relations, the school should encourage the formation of clubs—open organizations—for those who have common interests in some form of study or recreation. There should be a club for everyone, for a club serves two purposes: First, it intensifies an interest in something worth while; and, second, it aids in the formation of friendships based on worth-while interests.¹

Fretwell, in discussing the same problem from the standpoint of high-school boys, says :

The more active boys will have clubs, open or secret, regardless of the school. It is perfectly reasonable that congenial people of like interests should get together. Since these organizations will exist, it is the school's business through the spirit of the school, the student council, and a faculty adviser, to see that these groups work and play effectively toward some worthy end.²

Elsewhere in discussing the same problem from the standpoint of both boys and girls, he says :

The instinctive tendency in high-school pupils that results in so many kinds of clubs is perfectly natural. This tendency may be developed so that pupils in their freer associations learn how to work together and how to use their time intelligently. Interests started in the club or outside of it may be used to worthy educational ends. Through these activities they may be training in the formation of right habits, in standards of taste, training in a right direction of the

¹ *Baltimore School Survey*, Vol. III, p. 94.

² *Ibid.*, p. 102.

emotions. There may be hard work and wholesome fun so combined that the pupils, perhaps without knowing it, get a keener insight into the real joy of living. High schools must train for joy in achievement — joy in the solution of problems social or mathematical. There must be zest, power, zeal in this mixture of work and play called life. Clubs for everyone in high school is one way of working toward this end.¹

Another factor accounting in no small part for the phenomenal growth and popularity of school clubs is the fact that we are living in a club age. Everywhere there have sprung up in the course of the last few decades innumerable clubs of the most varied kind. And today they are more diverse and more popular than ever. In a measure these clubs are part and parcel of the movement which is making us a nation of cities. More largely, perhaps, they have come in the wake of the movement for universal education — a movement which has brought with it greater intelligence, more varied interests, and a deeper social consciousness. Although not always wholesome, these clubs represent a most significant trend in social evolution. They are in the making as social forces of the most potent type. This being the case, it is a very definite function of the school to prepare the future citizen for effective and wholesome participation in them.

The clubs which are increasingly finding favor in leading junior and senior high schools throughout the country may be conveniently grouped under the following heads :

1. Academic — centering about the natural sciences, the social sciences, mathematics, and foreign languages.
2. Pre-vocational — centering about home economics, industrial arts, agriculture, commerce, and mechanics.

¹ *Report of the Survey of the Public Schools of Philadelphia*, Vol. IV, p. 150.

3. Art — centering about the fine arts.
4. Music — centering about vocal and instrumental musical activities, and embracing especially choral, glee, orchestral, and band organizations.
5. Athletic — centering particularly about the various competitive sports and games.
6. Literary — centering about general literary activities, debating, dramatics, forensics, and writing.
7. Recreational — centering about outings, travel, and games.
8. Welfare — centering particularly about social service, and embracing such organizations as boys' and girls' service leagues, the boy scouts, and the camp-fire girls.
9. Honor — centering about meritorious achievement and service along various lines, both curricular and extra-curricular.

Nor is this list at all exhaustive. Progressive schools throughout the country are increasingly adopting the motto: *Clubs for every pupil*. Accordingly, when a group of pupils not already overtaxed with other activities wishes to organize for a legitimate purpose, it is usually encouraged to do so. And this is as it should be.

That clubs occupy an important place in the extra-curricular life of the better junior high schools may be gleaned from the following quotations in which Professor Lyman describes the club life as he found it at the Ben Blewett Junior High School of St. Louis, Missouri, and at the Washington Junior High School of Rochester, New York. Regarding the former, he says:

Among the various clubs which meet every Tuesday afternoon are the following: Girls' Outdoor Sports Club, Boys' Basketball Club, Girls' Basketball Club, Hiking Club, and Boys' Football Club, whose

names signify their purposes. Of these weekly clubs, whose purpose is distinctly athletic, about 300 boys and girls are members; about 500 boys take part in play-ground baseball each week; and 250 boys have competed in the field events of a single Tuesday. Thirty boys form the regular Rugby Football Squad, which plays with teams from other schools.

Six athletic clubs in which membership is voluntary were mentioned above. The aim of the school to have all pupils enrolled in one extra-curricular activity has led to the formation of twenty-eight other clubs, all of which meet at the final class period each Tuesday, which becomes for this purpose a seven-period day. Each of the six regular recitation periods of the day is shortened sufficiently to provide a full hour for club work. Membership in one of these clubs is required, with this interesting alternative: A pupil may elect to spend the period in a study-room at work upon his lessons. About fifty pupils choose the alternative. Each club has a teacher as sponsor who keeps a guiding hand upon all its activities. Records of attendance as in all classes are required.

The work of all the various clubs correlates directly or indirectly with subjects of study in the regular curriculum. Some of the directors have pointed out the fact that the work of certain organizations is intimately connected with more than one subject. The following grouping of clubs shows their most direct correlation:

1. *English*

Blewett Literary Society
Dramatic Club
Expression Club
Literary Club
Reporters' Club
Story Writers' Club
Social Hour Club

2. *Languages*

French Club
Latin Club
Spanish Club

3. *Social Studies*

Know Missouri Club
Know St. Louis Club
Stamp Club
Travelers' Club

4. *Commercial*

Typists Club
Young Business Men's Club

5. *Science*

Agriculture Club
Garden Club
Junior Experimenters
Nature Club
Bird Club
Star-Study Club

6. *Practical Arts*

Art Club
Cooking Club
Gas Engine Club
Girls' Manual Training Club
Boys' Manual Training Club
Mechanical Drawing Club
Needle-Craft Club
Printers' Club

7. *Music*

Fife, Drum, and Bugle Corps
Girls' Glee Club
Orchestra

8. *Physical Training*

Girls' Basketball Club
Boys' Basketball Club
Hiking Club
Outdoor Sports Club

Not only is the student's part in the club wholly voluntary, but also the teacher's. Without exception, sponsors have volunteered their services for a club doing work in which they are personally interested. In many cases they have helped plan and organize the association, and are as much interested in the growth as any of the student members. Sometimes two teachers are associated in the work of one club. This is usually the case in organizations that have a large membership. Perhaps the chief factor in securing coöperation of teacher and pupil is the perfect freedom given to both in selecting the particular club in which they wish to work. The result is a spontaneous enthusiasm that secures genuine progress. Chief among the important by-products of the club work is the development of a fine school morale, everywhere evident. Scarcely less valuable also is the development of initiative and leadership. These benefits are due to the fact that pupils choose their own officers, make their own rules, arrange their own programs, and speak and act freely for the society.¹

In speaking of the club life at the Washington Junior High School, he says :

The scope of the club work is determined by the extra-curriculum interests of the students and the ability to find club leaders among the faculty. Every student in the school is a club member. Membership in some club is required, but selection of the particular club is wholly voluntary. . . .

The clubs include : glee clubs and choruses, school orchestra, and a boys' band ; the *Pathfinder* staff, editing the school paper ; athletic organizations of all kinds for boys and girls — organized games, hiking, swimming, drill clubs, a boys' military club, a girls' relief corps, and athletic teams ; literary clubs — debating, dramatic, two-minute men's clubs, story-telling and short story club, watch-your-speech club, French and Spanish clubs, and patriotic league for girls ; camp-fire girls' auxiliary club and boy scout patrol leaders' training clubs ; science clubs — wild flower, bird, chemistry club, and general science ; travel club and exploration club, stamp club and camera club, poultry club, wireless club, kite club, first-aid club, scrap-book club ; many clubs of a vocational character utilizing the special equipment of the

¹ *School Review*, Vol. XXVIII, pp. 106-108.

differentiated courses on the extension plan — electricity, drafting, steel-working, cartooning, handicraft, aero club, shorthand, pencil-drawing, pen-lettering, knitting, millinery, tatting, embroidery, crochet, and girls' handicraft clubs.

The club organization is directed by an executive committee of the faculty. There are forty-nine clubs with sixty-four faculty leaders and a membership of 1,650 students. Each club has its own student organization, and club meetings are conducted, as are class meetings, by student officers with faculty guidance. By reducing the School Activities period on Monday to fifteen minutes, the Friday club period is increased to fifty-five minutes. Membership of the clubs disregards all departments and distinctions. Each club may include in the membership representatives of all departments and all grades of the school. The only determining factor in the club organization is the choice of the student. The guiding principle of the school creed — "Make a democracy of the school" — prevails in the club organization.¹

If clubs are to be real constructive forces in the life of the modern school, it is imperative that they should be administered in the right manner. Above all, teachers and principals must bear in mind the fact that these organizations cannot be made to order. They must be allowed to grow rather spontaneously out of the many and varied interests of the pupils, always of course under controlled conditions. Fretwell says :

Clubs, to be real clubs, have, on the part of their members, so much of idealism, enthusiasm, earnestness, and loyalty that they can be neither decreed nor forced. They must be developed. In their development, the pupil's point of view must be the starting point. As educators, teachers must so arrange and guide the situation that the pupils will get from where they are to where they ought to be. In the freer association of the clubs, this idea applies with even more force than in the regular academic subject-matter.²

¹ *School Review*, Vol. XXVIII, pp. 203-204.

² *Report of the Survey of the Public Schools of Philadelphia*, Vol. IV, p. 149.

Beyond this, it is of course essential that the school should encourage the clubs in every possible way and not merely tolerate them.¹ This means that it must generously place at their command such reasonable and legitimate facilities as are needed. Each organization must have a sponsor. In a school where the extra-curricular life has taken rather firm root, these advisory functions will of necessity make heavy demands upon the faculty — so much so, that each teacher will be required to serve several organizations. It is scarcely reasonable to expect teachers to assume these functions — functions which will often in the very nature of the case tax their energy and resourcefulness much more than the routine activities of the classroom — in addition to a full teaching program. It is imperative that the school should recognize this fact and make definite allowance for extra-curricular services on the programs of the teachers. When provided for in this manner, such services will, quite aside from their value to the clubs, react very favorably upon the teachers. Fretwell says:

The position of adviser for a club helps to keep a teacher human or to humanize those teachers who for some reason have lost the heart of youth. Every principal and supervisor has an opportunity to know how some teachers, many of them long in service, have through the routine of the classroom or somehow else lost the joy they once had in teaching. They have come to this point where they teach subject-matter instead of teaching pupils. Again there is the special-

¹ Thomas-Tindal, Emma V., and Myers, Jessie Duval, *Junior High School Life*, The Macmillan Company, New York, 1924. Chaps. XIV-XV. This book gives a most interesting and valuable account of the manner in which the club life of the Holmes Junior High School of Philadelphia is organized and administered. This school has probably gone farther than any other in the encouragement and direction of club activities in keeping with definite educational objectives. The reader will find this account of the greatest practical value.

ist, young or old, who is interested in the scientific classification of knowledge and in the imposing of this classification on pupils, rather than in leading pupils through experience to organize knowledge for themselves and at the same time to know and appreciate what others have done. If these teachers can, through force of public opinion or for any worthy appealing reason, be induced to act as advisers of pupils' clubs, they may catch the point of view of youth and thus become more effective teachers.¹

Finally, these organizations are obviously in need of quarters and time allotments. Many schools are meeting this need by setting aside a definite period each day for the many and varied extra-curricular activities. This places at the disposal of the clubs one or two periods each week. Since none is likely to meet more than once a week, and some at least will meet only every other week, such a time allotment should be quite adequate.

PUBLICATIONS

Student publications do not occupy the place which they merit in our secondary schools. A recent investigation involving 210 North Central Association high schools — schools ranking doubtless materially above the average for the country at large — brought out the fact that 185, or 88 per cent, of the schools in question publish an annual; that 129, or 61 per cent, publish a newspaper; and that 32, or 15 per cent, publish a magazine.² This is a very poor showing when one takes into consideration the educational possibilities of journalistic activities and the part which journalism plays in real life.

Fortunately, leading educators throughout the country are becoming increasingly aware of the value of journalistic

¹ *Op. cit.*, pp. 150-151.

² *School Review*, Vol. XXXI, pp. 204-212.

activities. Not only are they coming to recognize their educational significance, but they are coming to look upon them, especially in the form of the daily newspaper, as an indispensable aid in the administration of a modern school. Reavis's point of view, as set forth in a recent article, is typical. He says :

Any publication that serves as a medium of communication for the school community, if prepared by the student body as a real record of interesting happenings, and if properly edited, should have an important place among the activities of a modern high school. It should stimulate purposeful writing of the sort that has been greatly neglected by English teachers of the culturist type. Such writing should be natural to the majority of students who have ideas to express and the inclination and desire to communicate their ideas to others.

Teachers who are willing to encourage writing of this kind will find the school paper a great incentive to production. It makes available for themes and paragraphs the whole range of interests and activities of school life. The knowledge that approving friends may see and read in print the results of one's efforts encourages greater care in writing and the selection of topics that are of current interest to the school. Class meetings with their appeal to students of particular groups, athletic or other interschool contests, with their interest for all, incidents of the classroom, events of the school day, mass meetings, or personal meetings may furnish material for narrative or descriptive study. The editorial column provides a real incentive for writing of another type which may be just as natural and purposeful as that required in news items and stories.

While the stimulus to vital English work may be regarded as the most important result of publication in a modern secondary school, the impetus given to school spirit, pride, and loyalty is a close second. Through the columns of the paper, ideals and sentiments may be developed that will raise the general note of the school.

Another value of the school paper not to be overlooked is the increase in the efficiency of the school through the opportunity for regular communication between faculty, student body, and parents.

Important announcements, information regarding school policies, significant changes of any kind, and school or departmental progress can be placed before the school community in such form that proper assimilation of such matters can be made by every person concerned. As a result school opinion can be more quickly and easily crystallized and school solidarity promoted through the influence of the school press.¹

Nor is the growing interest in the student newspaper in any way limited to the senior high school. It is quite as much in evidence in the case of the junior high school. Almost without exception the better junior high schools throughout the country are publishing newspapers — weekly, biweekly, or monthly. On the whole the trend is toward the weekly publication.

Memorial Junior High School of San Diego, California, organized in 1922, offers an interesting example of the possibilities of junior high school journalism. From the very outset this institution has published a real weekly newspaper covering from six to eight pages. The content is obviously written by the pupils and reflects the life of the school in a most commendable manner. The following editorial comment from the issue of March 21, 1923, will serve to illustrate this:

Well, the election is over. Some of us have smiles so broad that our faces are almost split and some of us have faces so long that we almost step on our chins, so disappointed are we in the outcome of the election.

It all started a week, two weeks it is now, ago when some unsuspecting male member of the faculty rose to his feet and made this wise remark: "Girls will never vote for boys." One of the teachers when talking to a group of girls about the election let this slip, and then the fight was on.

¹ *School Review*, Vol. XXX, pp. 516-517.

The girls campaigned as girls have never campaigned before. The boys were amused at first. Then they became a little concerned and then began working in earnest themselves. The movement on the girls' part that was the result of the final awakening was a girls' assembly one morning before school. The boys expected it to be a flat failure, but it wasn't. The boys then held a rally outside one day at noon, and one of the candidates was carried on the shoulders of his supporters.

During all of this time the print shop was running to capacity, printing all kinds of propaganda for both factions impartially and carrying on heated arguments all the while.

At a general assembly all candidates spoke after being introduced by their campaign managers; this assembly was most successful and dignified. The girls were elected to two of the offices, but a boy was elected to the presidency by a majority of some thirty votes.

The candidates are most capable, and Memorial is very proud of them all. We wish them, the officers, a term of office that is in every way successful.

The following excerpts from the same issue make it quite clear that Memorial Junior High School has the right point of view in school journalism. It not only wants a newspaper reflecting the life of the school but one actually gotten up by the pupils at large, the staff acting merely as a guide:

In this school there are many very good students. Many of them are good writers, many are not, but all of them get a bright idea occasionally. Now we need all the bright ideas we can get and a few more besides. So write up these bright ideas for the paper and send them in. But don't think that the editors over here are running the entire thing and if you sent anything in, it would be cast aside. Because what we want is a paper that belongs to the students, not a paper written, edited and published by a few, as many of the school papers are. So send in everything that is worth while. Don't be afraid that you are not capable of anything that is good, or don't be too lazy to write something.

Students of Memorial: Are you interested in your school paper?

If so, why aren't you writing some article for it? Do you not realize that with a little help from each of you our school paper should become the best junior high school paper in the country? Why make the staff do all the hard work? If this keeps on, you will all be disappointed in your school paper, as the staff alone will not be able to bring it up to expectations. Members of the staff know many students who would make good if they would only try. People who can give good speeches surely can write splendid articles. If you can write anything that is interesting, whether fairy tales, poems, jokes, descriptions, or comical stories, do so and hand them in and, if they are interesting, the staff takes great pleasure in publishing them.

The newspaper is without question the most significant of the student publications, partly because of the rich opportunities which it offers for general all-around pupil participation, and partly because of the influence which it exerts upon the spirit and the morale of the whole school. The literary magazine, although better adapted to senior high schools, doubtless also has its place in the larger junior high schools, especially when it can be printed at relatively slight expense in the school shops. Under no circumstances, however, should it be allowed to take the place of the general newspaper.

Regarding the annual there is at present much difference of opinion. This publication, after assuming tremendous proportions in colleges and universities, has come to occupy an important place in the senior high school and is by no means unknown in the junior high school. As a secondary-school publication it is today from the standpoint of numbers a close second to the newspaper, and in expense it actually outranks the latter.

Those who are opposed to the annual as a secondary-school publication maintain that it involves altogether too much expense; that it represents as a rule the efforts of a

relatively small group of pupils; that it is undemocratic, representing only upper classmen and the socially prominent; and above all, that it falls too far short, from the standpoint of literary and artistic standards, to be really worth while. In general the point of view of those who are opposed to it is rather well expressed in the following statement of a recent writer. She says:

As faculty adviser for the annual published in one of our high schools, I have witnessed the efforts of each successive staff to put out a bigger and better magazine than has ever before been issued. I have seen the heroic struggle of the business manager and his assistants to extract the necessary number of subscriptions from a more or less apathetic student body, and each year I have had the pleasure of looking on at the final day of triumph, when the annual is "out" and everybody is feverishly searching to see that the right thing has been said and the right pictures shown of himself, his friends, and his favorite activities. After a few days of busy autograph collecting, every annual disappears and joins the collection of programs and other memorabilia belonging to each student. The whole performance reminds one of nothing so much as of a hostess who devotes an entire day to the preparation of a meal that is consumed in less than an hour and promptly forgotten by the guests.

Unless there is some extraordinary occasion for the expenditure of so much time and effort, it seems decidedly wasteful. And it must be admitted in the case of the high-school annual as well, that unless there is some special value in the annual itself or in the activity that is required to produce it, this undertaking also is extremely wasteful.¹

Regarding the shortcomings of the annual as a literary and artistic production, she says:

On the second point, involving the setting up and maintaining of high standards, the average annual fails lamentably. For one reason or another, and usually with the best of intentions on the part of every-

¹ Hayes, Harriet, "The Case against the High-School Annual." *University High-School Journal* (California), Vol. II, p. 426.

one involved, high schools do send out magazines that are very poorly organized and that represent no consistent standards of either form or content. Title pages are badly arranged, dedications are misplaced, and pictures inserted in almost any order, often in defiance of all the technique of bookmaking. The departments are often thrown together hastily, are poorly edited, and made up of articles that have slight merit as examples of English composition and indeed little value from any point of view. The departments that give a chance to people who really enjoy writing and writing well — by these I mean especially the literature and editorial departments — are often pushed into the background or banished altogether. The elementary principle of organization, that there should be a unity of effect from cover to cover, that the color and design of the covers, the style of illustration, and the type used in printing should contribute to a general harmony, is often completely ignored. It is not surprising that the result is disappointing. One of the chief arguments urged against the annuals is that they fail to uphold or even aspire to any worth-while standards.¹

After summarizing her arguments in “the case against the annual,” she adds in conclusion :

Friends of the annual may feel that this is an unjust indictment to bring against an old favorite. They will feel that it has a large part to play in building up school spirit and enthusiasm, that it has a tremendous sentimental value, that it perpetuates the absorbing experiences of high-school days as nothing else does. Most of this is true. But a study of the whole situation forces us to the conclusion that if these ends cannot be achieved with less waste, with more satisfaction to all concerned, the annual in its present form should be abolished.²

That the annual is often too expensive ; that it is in many cases not as representative of the efforts and the life of the whole school as it should be ; and that it does not always represent the best efforts of those producing it, may be

¹ *Op. cit.*, pp. 429-430.

² *Op. cit.*, p. 432.

readily granted. But these shortcomings, as Reavis points out in a recent discussion of the problem, "are not necessarily inherent and can be corrected," and the annual as such "can be made a valuable yearbook of school history that will justify fully the efforts required on the part of the school to produce it and make it a success."¹

The fact of the matter is that the case against the annual is too often a case against the point of view of the faculty. Too many of the older teachers persist in viewing student activities, in and out of the classroom, in the light of adult standards. If the final product meets the acid test, the undertaking was worth while; if it does not, then the time and the expense and the effort were largely wasted. That the whole performance, however halting it may have been and however imperfect the outcome may be from the standpoint of adult standards, may have been tremendously worth while educationally is too often entirely overlooked.

The writer has no desire to explain away the problems incident to the publication of the annual. He is thoroughly convinced, however, that its publication constitutes an educational project so replete with significant pupil experiences that it is immeasurably worth while in spite of the problems in question. In the last analysis the problems themselves are probably no more insuperable than the problems incident to the teaching of many of the academic subjects. The chief requisite is that we face the situation frankly and that we deal with it energetically and intelligently. Pupils can be led to participate more widely in the enterprise as such; they can be induced to put forth more sincere efforts than they have heretofore; and they can be

¹ *School Review*, Vol. XXX, p. 518.

directed to avoid much of the waste and the extravagance commonly incurred.

In actual practice, junior high schools are issuing very creditable annuals. Compared with the rather pretentious publications of the senior high schools they are, as might be expected, distinctly modest. There is on the whole very little evidence of extravagance. Pupil participation and representation, however, do not appear to be as general as they should be. This is obviously the chief defect in the junior high school annual. The actual content of the annuals is on the whole very creditable to pupils of junior high school age.

THE ASSEMBLY

The modern secondary-school assembly, when conducted under controlled conditions by the students at large, offers educational possibilities on a par with the newspaper and the annual. When conducted by the principal or the faculty or by a few select students, as was commonly the case at one time, it loses most of its educational significance. The Commission on the Reorganization of Secondary Education, in discussing the moral values inherent in pupil activities, expressed itself as follows:

Compare, for example, two types of assembly. In the old-fashioned school the pupils gathered to sing a song or two, to hear the principal read from the Bible, to listen to an address from the principal or a visitor, and to hear individual "star" pupils, selected by the teacher, "speak pieces," likewise selected from above. Except for the singing, there was no coöperation on the part of the individuals or groups. The management being in the hands of the teachers, there was little or no chance for initiative on the part of the pupils. In the main the chief motive to which appeal was made was the desire for individual distinction, a motive at best inadequate, since only the few had a chance to shine as elocutionists.

Today the better type of assembly is run by the pupils. Its success depends not on the execution of a teacher's decision by a few, but on the voluntary cooperation of all. Working with a faculty adviser, they select the program and the ones who are to carry it out. It is a striking fact that where this is the case their choice so frequently takes the form of a dramatic offering. The reasons we need not stop to analyze. The significant thing is the opportunity here afforded for the interplay of initiative, responsibility, and the spirit of teamwork.¹

While many of the larger and more progressive secondary schools, including most wide-awake junior high schools, have caught the right point of view and are making the assemblies genuine pupil affairs, there are obviously many exceptions. A recent investigation of assembly practices in 112 Kansas high schools, data from 95 of which were included in the final report, showed that pupils were given very little opportunity to participate in the preparation of assembly programs. Indeed, in only 20 per cent of the cases were classes, supervised by faculty sponsors, allowed to prepare some of the programs. In more than half of the schools the assembly programs were arranged by the principals. In most of the remaining cases they were prepared by chairmen of faculty committees or by individual members of the faculty.² These findings are in all probability rather typical of the practices of the smaller schools throughout the country. This being the case, the democratization of the school assembly is a very real problem for a large proportion of our secondary schools, a problem which they cannot afford to ignore.

¹ "Moral Values in Secondary Education." U. S. Bureau of Education, *Bulletin No. 51*, 1917, p. 13.

² Evans, E. E., "What to Do with the High-School Assembly." *School Review*, Vol. XXXI, pp. 282-286.

The purposes of the modern school assembly and the manner in which it should be administered have been so ably set forth in a recent report by Fretwell that we shall quote him at some length. He says:

The assembly is the meeting place of the whole school. Here policies affecting the whole body of the school should be presented by pupils and faculty alike and discussed. Here public opinion is formed.

The spirit of the school not only shows or fails to show itself in assembly but the assembly may be used to form school spirit. The assembly period should not exist primarily to enable the faculty or head of the school to advise the pupils, however good this advice may be, nor is it a place for a formal routine service, nor yet a place where pupils must sit through the delivery of required "orations."

Community spirit in schools is desirable. Temporary enthusiasm may be aroused by an outside speaker, but real community spirit grows by the activity of the citizens, as citizens should take part in forming the spirit of the community. Opportunity should be given the school citizens' assembly to aid in forming this opinion under the most favorable circumstances.

Assembly programs or business carried on in assembly should be carefully prepared. This preparation should go on under the general supervision of the assembly committee of faculty and pupils. The various clubs and organizations of the school may be responsible for certain programs. School contests in public speaking or in any other activity make a good assembly program. The work carried on in various classes, especially in English and the social sciences, may have such general interest as to win deservedly the interest and attention of the whole school in assembly. Questions of good sportsmanship and the school's attitude toward its own and toward visiting teams may be discussed as a means of forming public opinion.¹

ATHLETIC ACTIVITIES

In the more progressive junior high schools athletic activities, including plays and games, have in many cases been

¹ *Baltimore School Survey*, Vol. III, p. 106.

accorded practically a curricular status. It is not at all unusual to find a full period throughout the week devoted to physical education, with three of the five periods given over to more or less informal athletic activities — contests, plays, and games — under the direction of the instructor in physical education. The administration of these activities differs from the administration of regular classroom activities only in the fact that the instructor, instead of directing one group in a formal manner, directs several groups, each of which exercises considerable initiative and assumes large responsibility.

In characterizing the procedure at the Ben Blewett Junior High School of St. Louis — a school which has made tremendous strides toward a sound and democratic administration of athletic activities — Professor Lyman says :

Blewett endeavors to stress intraschool athletics and organized play; attempt is made to draw every boy and girl into the games of gymnasium and playground. A wholesome spirit of competition is fostered between individuals and classes, and with the individual's own achievements. During the past autumn there have been series of interclass games in playground baseball, in soccer, in track and field athletics. Monday afternoons find six interclass games of seventh-grade advisory groups. Wednesdays, eighth-grade teams. Fridays, ninth-grade teams. Grade winners play each other for the school championship. Each Tuesday are held track and field contests, two or three events only each week, with separate tests and finals for the seventh, eighth, and ninth grades, culminating in finals for school championships. The Tuesday series, growing more strenuous from week to week, culminates in a cross-country run or a hare-and-hound race. Careful records in all events are kept, and, through a scoring system, boys who consistently show a fair degree of ability may win the school letter. The soccer series of competition for school championship, beginning with outer advisory group games, is inaugurated as soon as playground baseball is finished. Similar

series of outdoor competition in games suitable for girls are also held; baseball, dodge-ball, basketball, and volley ball are popular.¹

It is difficult to appreciate fully the significance of such a procedure in administering athletics. And it should be borne in mind that it is by no means utopian. Similar procedures are within reach of most secondary institutions, and are in actual practice being approximated by a very considerable proportion of the better junior high schools throughout the country. The procedure as such marks a most radical departure from the orthodox practices long in vogue in secondary schools — practices which limited participation in athletic activities to the select few, often to their serious detriment from the standpoint of scholarship, character, and health. The progress which junior high schools have made in this respect is one of the finest commentaries on the movement as a whole.

Elsewhere we pointed out that junior high schools are making increasing provision for clubs centering about informal athletic activities. These simply mark an extension and elaboration of the program as outlined above, supplementing rather than displacing it in any way.

MUSICAL ACTIVITIES

What has been said of athletic activities is in a measure also true of musical activities, though the two represent in some respects rather different situations. Like athletic activities, musical activities were long limited to the select few. More recently, however, there has been a marked change in attitude and practice — so much so, indeed, that progressive secondary schools throughout the country are

¹ *School Review*, Vol. XXVIII, p. 106.

increasingly offering ample opportunities for actual participation in a variety of musical activities to all who possess the interest and the ability.

As a matter of fact, universal participation is probably not as essential in music as it is in athletics. Nor does it appear to be possible to the same extent. Universal participation in athletic activities is essential for health reasons and is, moreover, quite possible since it does not depend upon specialized abilities. Actual participation in musical activities, involving vocal or instrumental execution, depends to a very considerable extent upon specialized abilities and is, therefore, beyond the reach of many. It may be objected, of course, that almost anyone may participate in singing. This is in a large measure true, and to that extent informal community singing should doubtless occupy an important place among the musical activities of the junior high school.

Beyond this, practically all individuals have some capacity for musical appreciation. This capacity responds very definitely to education involving instruction and ample opportunities to witness actual performances. Fortunately, the development of musical appreciation, like the development of appreciation generally, is not conditioned by participation involving actual execution in the technical sense.

Under these circumstances it would seem to be the function of the school to provide pupils first of all with abundant opportunities, perhaps largely through extra-curricular channels, to hear musical productions; then to encourage pupils in every possible way to participate in such simple forms of musical execution as community singing; and finally to provide, as far as possible under controlled conditions as in the case of athletics, ample opportunities for

actual participation in varied musical activities, such as glee clubs, orchestras, choruses, and bands, for those who have the interest and the ability.

SOCIAL ACTIVITIES

Social activities have long been the most unwelcome of all extra-curricular activities in our secondary schools. Even now they are in many cases tolerated as a necessary evil rather than welcomed as paramount educational agencies. Indeed, some schools state quite frankly that no organization the purport of which is not distinctly educational will be recognized. Having an educational purport, it should be borne in mind, may imply almost anything except preparation for polite social intercourse. Preparation for the latter, although it plays an important part in life, being in a sense the keystone of all the arts, is somehow regarded as beneath the dignity of such schools.

The consequences of this attitude have on the whole been rather disastrous. Young people not only need training for polite social intercourse, but they crave such intercourse if they are at all normal. If they cannot get it in one way they usually try to get it in another, and they frequently succeed. Secret organizations, which have in recent years given school authorities so much concern, sprang up largely because the school refused to meet the legitimate social demands of young people.

Fortunately, there is in evidence a decided change in point of view among progressive schools throughout the country. Leading school authorities everywhere are increasingly coming to recognize the fact that the craving for polite social intercourse is perfectly normal and natural on the part of the adolescent. They grant freely that the

school must make every effort to meet this demand in an adequate manner. Almost without exception, inquiries into the actual status of social activities elicit the response that existing programs are too limited and that more elaborate ones are being worked out as fast as circumstances permit. This is altogether different from the one-time curt reply that adolescents are too young and too irresponsible to engage in polite social intercourse.

In actual practice sincere efforts are being put forth to provide opportunities for social training. Not infrequently these opportunities are provided for more or less incidentally in connection with other extra-curricular activities, especially in connection with the varied club life. Roberts says :

Shot through the whole extra-classroom organization is the social motive. Technical training is the first object of most of the clubs, but the opportunity for social experience is ever a close second. To each class, club, and society is accorded the privilege of one or two parties each year, several of which start at six or six-thirty with "eats," after which a program of "stunts," music, and games is carried on until nine or nine-thirty, when the party breaks up. In the spring numerous beach parties and picnics are held by the smaller groups, and a limited number of all-high-school dances are held throughout the year in the gymnasium, invitations to which are limited to members of the school and faculty.¹

Beyond this, many schools have made considerable progress toward making direct provision for participation in polite social intercourse through such agencies as receptions, parties, and dances.

While the reception may not always afford the greatest amount of enjoyment at the moment, it has unquestionably great educational value and should be encouraged even in a

¹ *School Review*, Vol. XXVI, p. 34.

junior high school. As far as possible it should be conducted on a democratic basis and in accordance with the best social usage. Parties and smaller social gatherings will afford more genuine pleasure, since they are less formal and more homogeneous. Their educational value, too, is undeniably great. As far as possible these gatherings should, for educational reasons, include both sexes. Occasional gatherings limited to either sex are quite in keeping, however, and by no means devoid of educational value.

Where local circumstances permit, the dancing party affords without question one of the most valuable forms of social intercourse. The stock objection that it harbors insuperable moral dangers is too trite to be taken seriously. The fact of the matter is that the most valuable things in life frequently harbor the greatest dangers, but that in no way implies that they are to be discarded. What it does imply is that they must be handled with care; and that is doubtless true of the school dance.

In discussing the problem of school dancing in a recent report, Fretwell says among other things:

For the great majority of boys and girls there comes a time when they must dance. It is an instinctive tendency to express a love of rhythm and operation. Boys and girls are going to be together and they are going to dance. If the schools do not use this instinctive tendency for developing the right standards of dancing, certainly school authorities and supporters of public schools cannot criticize unfavorably the dancing of young people whom they could instruct but do not. . . . Public high schools should provide this opportunity for boys and girls to meet together socially when parents approve and to dance under normal conditions. For many pupils the school can furnish the best opportunity for boys and girls to meet socially and naturally.¹

¹ *Report of the Survey of the Public Schools of Philadelphia*, Vol. IV, p. 133.

THE ADMINISTRATION OF EXTRA-CURRICULAR ACTIVITIES

Administrative machinery. Much has already been said indirectly regarding the machinery which is essential for the successful administration of extra-curricular activities in connection with our discussion of pupil participation in school government. Any genuine scheme for pupil participation in school government implies obviously much more than participation in mere disciplinary matters; it implies participation in the management of all extra-curricular school affairs. For educational reasons pupils are to participate in the management of the entire school community, always of course under the guidance and direction of the faculty. The machinery for pupil participation in school government is, therefore, in the main also the machinery for the administration of extra-curricular activities. Each extra-curricular activity has, of course, its own administrative machinery, but this is, in a well-planned scheme, merely a part of the whole.

As indicated earlier, the machinery for pupil participation in school government is most commonly patterned after our municipal, state, and national forms of government. Whatever the form of the machinery, however, it must always be supplemented by definite provision for supervision and guidance on the part of the faculty. Here again each extra-curricular activity has of course its own sponsor, but, along with the administrative machinery governing the activity in question, this sponsor is in the last analysis merely a part of the larger whole. This larger whole, be it the principal, a special adviser, the faculty, a council of sponsors, or a combination of some of these, represents the final supervisory and administrative authority of the school. In many schools

this function rests largely in the hands of the principal or the vice-principals; in others it is delegated to councils made up of faculty advisers; and in an increasing number of cases there is in evidence a disposition to delegate it in large measure to a special adviser. While the principal and the faculty should doubtless always exercise large powers, there is much to be said in favor of a special adviser. In the case of the larger schools there might well be two of these advisers, one for girls and the other for boys. It goes without saying of course that those who are to serve in this capacity should be specially trained for such service. They should be social engineers of a high order.

Other factors. But there are factors apart from the immediate administrative and supervisory machinery which condition in a large measure the successful administration of extra-curricular activities. Among these are an adequate time allotment on the daily or weekly program for the activities as such; due allowance in connection with the teaching-load for the encouragement, supervision, and direction of such activities; and sound methods of making awards for notable achievement. The first and second of these factors have been elaborated elsewhere, and so need not be discussed further at this point, except to stress once more, in passing, the fact that there is an increasingly strong disposition on the part of the more progressive junior high schools throughout the country to allot one period each day for such activities and to make a fair allowance for their supervision in connection with the teaching-load.

Awards for notable achievement. The third factor — provision for sound methods of making awards for notable achievement — is quite as significant as either of the others.

As is commonly known, school authorities were long in the habit of limiting signal awards largely to athletic prowess. More recently, however, there has been a growing disposition on the part of the more progressive schools throughout the country to extend the range of the activities in connection with which signal awards might be made. In some cases this extension has gone so far that practically every legitimate extra-curricular activity may be recognized in this way. This is of course as it should be. The plan in operation at the Ben Blewett Junior High School of St. Louis illustrates in a striking manner the possibilities of the newer methods of making awards. Professor Lyman characterizes it as follows :

In common with the practice of most high schools, the school letter — the Blewett “B” — in the past has been granted only to boys who have excelled in athletics. But this year, with the approval of the faculty, the school Cabinet adopted a new plan, more in keeping with the democracy of the school. The Blewett “B” is now granted to both boys and girls for marked success in (1) citizenship; (2) scholarship; and (3) extra-class activities of many sorts, including athletics. One limitation is imposed: No pupil may earn his “B” in any division if his record is unsatisfactory in the other divisions.

A second interesting innovation provides that the school letter must be earned by progressive achievement. The first time that the letter is awarded a pupil receives a bronze button; the second time, a silver button; and the third time, a felt letter to be worn on a sweater.

To be noted in this connection is that all pupils are given regular grades in citizenship to be taken home quarterly with their other marks. Pupils who receive 85 per cent excellent are candidates in citizenship for the “B.” A committee of the Blewett “B” Council then investigates each candidate by consulting their pupil adviser, teachers, and other group officers, checking each candidate for the following characteristics :

Citizenship

1. Personal questions
 - a) Is he clean in person?
 - b) Is he orderly?
 - c) Is he neat in dress?
 - d) Does he take care of his teeth?
2. Moral qualifications
 - a) Is he courteous?
 - b) Is he honest?
 - c) Is he industrious?
 - d) Does he choose good citizens for friends?
 - e) Does he practice clean speech?
 - f) Does he practice fair play?
3. Positive contributions to the school
 - a) Is he a good class officer?
 - b) Is he a good leader for a ball team, music class, group work, etc.?
 - c) Is he a good corridor officer?
 - d) Does he take an active part in boosting his group and his school in campaigns of various kinds?

Similarly, scholarship records are checked by the scholarship "B" committee, and athletics records by an extra-class "B" committee. The right to wear the emblem may be revoked by the council for unsatisfactory conduct or record. On the contrary a ninth-grade pupil may earn the right to wear all three letters "B" — the plain letter for scholarship, Old English for citizenship, and black for extra-class activities. The bronze button may be worn by a pupil in the second half of the seventh grade, the silver button in the eighth, and the felt letter in the ninth as early as it is earned.¹

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CHAPTER VIII

ORGANIZATION AND ADMINISTRATION OF JUNIOR HIGH SCHOOLS

GRADE COMBINATION

We have assumed all along that the junior high school would ultimately, in spite of many early departures in practice, come to be a three-year institution, embracing grades seven, eight, and nine. The current trend in the development of the new institution tends to confirm this assumption. The chief departures in practice at present are the two-year institutions, embracing grades seven and eight, and the four-year institutions, embracing grades seven to ten inclusive.

Two-year institutions characteristic of the transition. The two-year institutions, although still quite common in certain parts of the country, especially in smaller communities, represent little more than a temporary stage in the transition from the eight-four to the six-three-three plan. In no way can they be said to represent an adequate adaptation to the legitimate demands of a real situation. They may, therefore, be expected to disappear increasingly, and in actual practice they are rapidly giving way to organizations more in keeping with the demands of the situation.

Four-year institutions characteristic of possible adaptations. The four-year institutions — institutions which are as yet relatively few — represent a somewhat different state

of affairs. In so far as they exist at present, they are for the most part the outcome of serious attempts to adapt the new plan of school organization to the demands of real situations. They are most often found in communities which are essentially rural. Beyond this, there is a feeling in certain parts of the country where the junior college is rapidly becoming a part of the secondary division of our school system that the six-four-four plan of school organization may ultimately prove more suitable than the six-three-three plan. Indeed, some are firmly convinced that the trend is in this direction, and that the junior and senior high schools of the future will be four-year institutions.

This point of view is obviously based upon the assumption that we shall require eight years for the completion of that part of our educational program which is essentially secondary. And therein lies its weakness. As repeatedly stressed heretofore, the programs of the best European secondary schools extend, after centuries of experimentation, on an average over some six years. It is generally conceded, moreover, that these programs are, from the standpoint of the purposes which they are intended to serve, rather effective instruments. In the face of this it would be difficult to justify an eight-year secondary school program in this country, once the reorganization of our school system has been effected.

This does not mean that we may not in many cases extend local educational opportunities beyond the secondary level, especially along technical and vocational lines. Such extensions are in all probability quite inevitable. Under no circumstances, however, should we permit ourselves to confuse extensions of this type with the secondary-school program, even though they may be intimately associated

with our secondary schools from the standpoint of administration. They are essentially forms of higher education and should be so regarded. Any violation of this principle must inevitably becloud the real issues of secondary education and prevent a thoroughly functional reorganization of our school system.

Three-year institutions as the dominant type. The results of recent investigations show quite conclusively that the junior high school is rapidly coming to be a three-year institution, embracing grades seven, eight, and nine. Indeed, in the case of the larger and more progressive cities it has already come to embrace these grades almost without exception.

Superintendent Pratt's findings. In November, 1921, Superintendent Pratt of Spokane, Washington, sent a questionnaire to all cities having a population of more than one hundred thousand. Of the 68 cities thus approached, 60 replied — 14 stating that they had junior high schools in the making, and 26 that they had them in actual operation. Of the latter, 24 reported that their schools were organized on the six-three-three plan, and 2 stated that various plans of school organization were in operation.¹

Smith's findings. In 1920 Smith sent a questionnaire to 120 cities of various sizes, which were reported to have made considerable progress in the organization of junior high schools. Of these, 85 replied in time and in such a manner that it was possible to include them in the final report. Of the 85, 21 stated quite frankly that they had gone little beyond the departmentalization of the work in the seventh and eighth grades. Of the 64 which reported definite junior high school organizations, 46, or approximately 72 per cent,

¹ *School Review*, Vol. XXX, pp. 663-670.

had three-year institutions, and the remaining 18, or 28 per cent, had two-year institutions.¹

Stayer's findings. More recently Stayer sent a questionnaire "to cities of different sizes in every state of the country." Of these, 36 replied that they had no junior high schools as yet. The final report is based on 99 schools in 36 states. Stayer summarizes the results as follows:

The returns show that approximately two thirds of the junior high schools reporting were of the three-grade type, 63 comprising grades 7-8-9 and one comprising grades 6-7-8, while the remaining one third were, with one exception, of the two-grade type, comprising grades 7-8, or in one case grades 8-9. There is abundant evidence in the correspondence that the two-grade type is not the type eventually desired. Most of the two-grade schools are to be considered but temporary types, their present status being due to one or more of the following facts: (a) The junior high school system has just been organized and next year will retain what will then be the ninth grade; (b) existing building conditions preclude the organization of a three-grade school; (c) college entrance requirements have not yet been adjusted to meet the newer organization; (d) state school laws have not yet been adapted satisfactorily. There can be no doubt of the tendency toward the three-grade junior high school, comprising grades 7-8-9.²

Clement's findings. In states where rural territory and small towns predominate, three-year junior high schools are as yet in the minority. Clement reports investigations involving 40 school systems in Kansas and 32 in Indiana. Of the Kansas schools 60 per cent were organized on the six-two-four basis, 30 per cent on the six-three-three basis, 5 per cent on the six-six basis, and the rest on various other bases. Of the Indiana schools 32 per cent were organized

¹ *Educational Administration and Supervision*, Vol. VI, pp. 139-149.

² *School Review*, Vol. XXIX, p. 379.

on the six-three-three basis, 31 per cent on the six-two-four basis, 18 per cent on the six-six basis, and the rest on various other bases. Clement points out that the six-two-four plan appears to be largely a transition device.¹

Briggs's findings regarding prevailing sentiment. Briggs, whose elaborate questionnaire investigation was referred to at length elsewhere, found that the sentiment among educators "is overwhelmingly in favor of an organization of grades 7-8-9, 95.1 per cent voting it desirable and 40.0 considering it essential."²

HOUSING AND SUPERVISION

Variation in practice. Practices regarding the housing and supervision of junior high schools vary from place to place. In some cases the new institutions are housed in elementary-school buildings and supervised by elementary-school principals. In other cases they are housed in high-school buildings and supervised by high-school principals. In the majority of cases they are housed in separate buildings and in charge of a special supervisory staff. When housed with other schools, junior high schools may be to all intents and purposes essentially integral parts of these schools, or they may be relatively independent under the supervision of an assistant principal or a special junior high school principal.

Prevailing trend toward separate housing and supervision. The prevailing trend is, however, distinctly toward separate housing and supervision. In most cases housing and supervision with other schools is a temporary expedient, to be abandoned as soon as a thoroughgoing reorganization

¹ *School Review*, Vol. XXX, pp. 111-112.

² *Educational Administration and Supervision*, Vol. IX, pp. 193-201.

of the school systems in question can be effected. There are cases, however, where housing with other schools, especially housing with senior high schools, represents a very definite attempt on the part of the school authorities to adapt the organization of the schools to peculiar local conditions. This is particularly true in the case of small communities where it would be wasteful to duplicate faculties and equipment. In such cases, housing with other schools represents a genuine adaptation and may be expected to endure indefinitely. In most of the larger communities, however, separate housing and supervision are quite inevitable. The results of recent investigations leave no doubt of this.

Smith's findings. In summarizing the practices and characterizing the trend of development in the case of the sixty-four representative cities included in his investigation, Smith says :

In general it may be said that the trend is distinctly toward housing in separate buildings — 22 cities housing all their schools in this manner, and 10 a part of them. In addition, quite a number of the cities which are at present resorting to other methods stated frankly that these were temporary expedients forced upon them by local circumstances, and that they expect in time to adopt the separate plan. Housing with senior high schools is common in the smaller communities where one building will readily accommodate the two schools. It is also found in a few of the larger cities which are adhering rather closely to the idea of a continuous six-year secondary school. Housing with elementary schools is — except in the case of some of the two-year schools — most decidedly a makeshift and will be superseded by the separate plan as fast as the local building situation can be readjusted.

The tendency to make the junior high school a separate institution is evidenced further by the provisions for supervision. It will be seen from Table III that 29 of the 64 cities have all their junior high schools

in charge of separate principals and 8 a part of them. That is, in 58 per cent of the cities the prevailing tendency is to provide separate supervision for these institutions. In a number of instances these separate principals appear to be under the immediate jurisdiction of the senior high school principals. This is doubtless a good practice, particularly in cities where there is no special supervision of high schools. In the remaining cities the junior high schools are in charge of senior high school and elementary-school principals, or both. Not uncommonly, however, the supervisory work appears to have been delegated in part at least to assistant principals.¹

Stayer's findings. In summarizing the practices and characterizing the trend of development in the case of the 99 schools referred to above, Stayer says :

The figures concerning the housing of junior high schools indicate the following facts :

1. The tendency is toward the housing of junior high schools in separate buildings, though of the 99 schools reporting only one half are thus housed.

2. Of junior high schools of the three-grade type, one half are housed in separate buildings, 22 per cent with the elementary grades, and 27 per cent with the senior high schools. Strangely enough, the tendency toward separate buildings for the junior high schools does not appear marked until schools of about 700 pupils are reached and, *per contra*, schools of under 300 pupils do not show any marked tendency toward housing with the senior high school.

3. Of junior high schools of the two-grade type there is a greater tendency toward housing with the elementary grades, 36 per cent falling in that class, while 18 per cent are housed with the senior high school, and 46 per cent are housed separately.

4. In many cases building conditions rather than educational policies have been the determining factors affecting the housing of the junior high school.

The returns also showed the number of junior high schools which have separate principals, the number in which the principal of the

¹ *Educational Administration and Supervision*, Vol. VI, pp. 141-142.

junior high school is also principal of the elementary grades, and the number in which the principal of the junior high school is also principal of the senior high school.

1. Of the junior high schools of the three-grade type, nearly two thirds have separate principals, one fifth have principals who also are principals of the elementary schools attached, and one sixth have principals who are also principals of the senior high school.

2. Of the junior high schools of the two-grade type, more than one half have separate principals, 30 per cent have principals who are also principals of the elementary schools attached, and only 12 per cent have principals who are also principals of the senior high school.

3. Of all 99 junior high schools reporting, nearly two thirds have separate principals, nearly one quarter have principals who also are principals of the elementary schools attached, and 14 per cent have principals who are also principals of the senior high schools.

4. The tendency is obviously toward a separate principal for the junior high school. Particularly noticeable is the relatively small number of junior high schools having as principals persons who are also principals of the senior high schools, even where the two high schools are housed in the same building.¹

Briggs's findings regarding prevailing sentiment. Briggs found, in connection with the questionnaire investigation referred to above, that "more than four fifths of the sentiment" among leading educators throughout the country favored "a complete independence of organization when the school system is large enough to make it feasible."²

ADMISSION OF PUPILS

Prevailing sentiment favoring admission of all normal children twelve to sixteen years of age. The first major purpose of the junior high school is to provide a suitable educational environment for children approximately twelve

¹ *School Review*, Vol. XXIX, pp. 280-281.

² *Educational Administration and Supervision*, Vol. IX, p. 290.

to sixteen years of age. If the junior high school is to function effectively with reference to this purpose, it must obviously open its doors to all normal children who have reached the age of twelve, even though they may not have met all the requirements of the preceding grades. In theory this principle has been quite generally accepted by educators throughout the country.

Briggs's findings. Briggs, in sounding the sentiment of educators on this point, found that 90.1 per cent held that "the junior high school should be suitable for *all* children twelve to sixteen years of age." The professors especially were unanimous on this point. The principals, for reasons which we shall discuss later, were somewhat more hesitant, 83.4 per cent approving it, however.¹

Recommendations of the Commission on the Reorganization of Secondary Education. The Commission on the Reorganization of Secondary Education expressed itself as follows:

Admission to high school is now, as a rule, based upon the completion of a prescribed amount of academic work. As a result many over-age pupils either leave school altogether or are retained in the elementary school when they are no longer deriving much benefit from its instruction. Should a similar conception of the articulation of the two schools continue after the elementary-school program has been shortened to six years, similar bad results will persist. Experience in certain school systems, however, shows that the secondary school can provide special instruction for over-age pupils more successfully than the elementary school can. Consequently we recommend that secondary schools admit, and provide suitable instruction for, all pupils who are in any respect so mature that they would derive more benefit from the secondary school than from the elementary school.²

¹ *Educational Administration and Supervision*, Vol. IX, p. 291.

² "Cardinal Principles of Secondary Education." U. S. Bureau of Education, *Bulletin No. 35*, 1918, p. 19.

Recommendations of the North Central Association of Colleges and Secondary Schools. The North Central Association of Colleges and Secondary Schools takes a very similar position. Its recommendations in a recent report read as follows:

The commission recommends that the admission of pupils into the junior high school shall be determined on the basis of maturity and the ability of the pupil to profit by the junior high school work offered, rather than by completion of the sixth grade solely. Therefore —

1. All pupils who have completed the first six grades of the elementary school should be promoted to the junior high school.

2. All mentally normal but retarded pupils should be transferred to the junior high school at least one full year before the legal age for leaving school. For many of these, special educational provision must be made.

3. Other children should be admitted who have shown ability, even though they may not have completed the sixth grade.¹

Practice lagging behind theory. As might be expected, this principle has not been as widely embodied in practice as it has been accepted in theory. Practice usually lags behind theory, especially where fundamental social changes are involved. The fact of the matter is that we have become so thoroughly accustomed to the graded lock step, and our school machinery is so well adapted to it, and, what is more, the public has come to regard it as so essential, that changes in practice must of necessity come gradually as our acceptance of the principle matures into conviction, as the necessary administrative machinery is evolved, and as the public catches the new point of view.

Evidence of progress. As a matter of fact there is ample evidence that we are slowly but surely translating into prac-

¹ *Proceedings of the Twenty-third Annual Meeting*, pp. 23-24.

tice the principle that the junior high school should admit all normal children approximately twelve to sixteen years of age, even though they may not have completed all the requirements of the preceding grades. This is brought out in an interesting manner by the results of successive investigations and also by the practices of cities which have advanced farthest in the reorganization of their school systems.

Douglass' findings. In 1915 Douglass characterized the situation as follows :

In answer to the question "Upon what do you make entrance to the junior high school depend?" 68 out of 94 replies mention nothing more than "promotion," "completion," or "satisfactory completion" of the preceding grade.¹

Briggs's findings. Some five years later Briggs summarized the findings brought to light through an extensive investigation as follows :

That there are in junior high schools numerous departures from the usual practice of promoting pupils only when they have "successfully completed" the sixth grade will be seen from the appended table. Of the 250 schools answering the question "Under what conditions, if any, do you admit pupils who have not completed grade VI?" 150, or 60 per cent, reply that they do under certain conditions admit pupils who are likely to profit by the junior high school work.²

Smith's findings. Smith, whose investigation of the junior high school practices of sixty-four representative cities was completed at about the same time, summarizes his findings as follows :

Theoretically it has been generally conceded that the junior high school should receive retarded pupils who have entered the early

¹ *Fifteenth Yearbook of the National Society for the Study of Education*, Part III, p. 48.

² *The Junior High School*, p. 104.

adolescent stage, quite as much as those who have completed the sixth grade on time. Table V shows the actual practices of the 64 cities in this respect. It will be observed that practice lags as yet materially behind theory. Only 9 of the 64 cities — about 15 per cent — make age the chief criterion for admission. However, 32 of the remaining cities — or 50 per cent of the total — consider age to some extent. All told, then, nearly two thirds of the cities make some allowance for age or maturity when admitting pupils to junior high schools. The two-year systems are clearly the most conservative in this respect.¹

The Berkeley plan. Individual school systems have in some cases made remarkable progress toward the practical solution of this problem. Berkeley, California, affords an interesting example. The Berkeley school system, it will be recalled, was completely reorganized on the six-three-three basis some years ago. This was followed, among other things, with a vigorous campaign to combat retardation, which had up to that time been about as prevalent there as elsewhere. According to the plan subsequently worked out, all over-age pupils in the elementary schools are transferred to the Burbank Junior High School, which cares for all adjustment work in addition to its regular functions as a junior high school. In discussing the operation of this plan in a recent report, Dr. Dickson, Director of the Bureau of Research and Guidance, says :

Through the guidance and counselling work in the Berkeley schools, nearly all of the serious cases of over-age and low mentality found in the elementary schools have been cared for in opportunity classes. Each term counselors and principals in all elementary schools are requested to recommend pupils for the special opportunity class at the Burbank School. These pupils are frequently doing failing work in third, fourth, or fifth grade, and yet are 13 years old or over.

¹ *Educational Administration and Supervision*, Vol. VI, p. 143.

Whenever it seems that such a pupil has received the maximum benefit possible to him in the elementary school, he is transferred into the intermediate-school opportunity class. For several semesters this program has been followed, with the result that we now have very few over-age boys and girls in the elementary schools who are merely "marking time."¹

In describing the adjustment work as carried on at the Burbank Junior High School, the principal, Mr. James T. Preston, says:

All boys and girls in the elementary schools of Berkeley, regardless of academic preparation, who have reached the age of 13 years, may be admitted to the opportunity class at Burbank. Retardation may have been due to sickness, travel, truancy, waywardness, foreign birth, or slowness. These pupils are admitted to the regular classes in those subjects in which they have the power to reach the grade. They are given individual coaching below the seventh grade. More than 70 per cent qualify in one or two terms to do regular grade work. The slow pupils are given the special types of work which it is found they can do successfully.¹

Difficulties encountered in practice. As indicated earlier, Briggs found that the junior high school principals were somewhat more hesitant in subscribing to the principle that twelve-year-olds of normal mentality should be admitted to junior high schools, even though they had not completed all the requirements of the preceding grades, than were the professors. The reasons for this are not far to seek. The principals are on the firing line, face to face with all the practical difficulties which are necessarily encountered in translating a new principle into practice. Not only does it fall to their lot to convince the public that the new depart-

¹ "Junior High Schools of Berkeley, California." U. S. Bureau of Education, *Bulletin No. 4*, 1924, p. 45.

² *Op. cit.*, p. 35.

ture will neither endanger nor undermine the stability of our educational system, but they must evolve the machinery which will enable them to care adequately for those irregularly admitted. To accept the principle in theory is, therefore, one thing, and to put it into practice quite another.

Facilities needed. Among the facilities needed to care for pupils who are admitted to junior high schools irregularly are ungraded adjustment and opportunity rooms. Without these it would be very difficult for pupils of this type to master the minimum essentials of the several academic subjects. Beyond this, there should be ample provision for industrial or pre-vocational activities, especially activities of the project type. Indeed, in many cases such projects should constitute the very backbone of the programs of such pupils, all other activities, including those of the adjustment room, growing directly out of these. Only thus may pupils be expected to find themselves. In some cases, especially where retardation is serious, it will doubtless be necessary to provide facilities for fairly definite vocational training. Above all, however, the machinery of the school must be simple and flexible. There should be no red tape, and no pale that is more sacred than the pupil and his peculiar needs.

DEPARTMENTAL TEACHING AND PROMOTION BY SUBJECT

These two factors are so intimately related that they must be considered as essentially one. Wherever there is departmental teaching in the sense that each of the major departments — English, foreign languages, the social sciences, the natural sciences, mathematics, industrial arts, fine arts, physical education — is in charge of special teachers, there is also as a rule, at least as far as the three-year

junior high schools are concerned, promotion by subject. The two-year schools frequently constitute an exception, promotion being in their case more often effected on a class or grade basis. The same thing is sometimes true also of three-year schools where departmentalization is partial, so that a teacher's work falls within more than one major department. The results of recent investigations throw considerable light upon actual practices in this respect.

Smith's findings. Smith found that fifty-seven, or 90 per cent, of the sixty-four cities included in his investigation had departmental teaching in whole or in part in all grades. In five of the remaining seven cities it was limited to the eighth and ninth grades, and in two to the ninth grade. Forty-seven, or practically 75 per cent, had promotion by subject in practically all grades. When the two-year schools were considered by themselves it was found that nearly 60 per cent were promoting pupils on a class or grade basis, and this in spite of the fact that all reported departmental teaching.¹

Clement's findings. Clement found that 60 per cent of the forty Kansas schools and over 59 per cent of the thirty-two Indiana schools referred to above had promotion by subject. It will be recalled that the three-year schools were in the minority in these two groups of schools.²

Stayer's findings. Stayer found that in the case of the ninety junior high schools located in thirty-six different states, 72 per cent of the teachers in the three-grade schools and 62 per cent of the teachers in the two-grade schools were teaching only one subject. These figures point very obviously to extensive departmentalization.³

¹ *Educational Administration and Supervision*, Vol. VI, pp. 143-144.

² *School Review*, Vol. XXX, p. 113.

³ *Ibid.*, Vol. XXIX, p. 385.

Departmental teaching an integral and essential feature of junior high school procedure. The arguments for and against departmental teaching have been ably set forth by Briggs.¹ They need not be repeated at this point. Suffice it to say that departmental teaching, although it harbors its dangers, is here to stay. It is an integral and essential part of junior high school procedure and cannot be dispensed with. The chief question is, therefore, not whether it belongs in the junior high school, but rather, as Briggs points out, "how far down in the grades it should extend and how gradually it should be introduced." At this point there is not only diversity in point of view but diversity in practice as well.

Diversity in point of view and practice due to local conditions. As a matter of fact this diversity in point of view and practice is in large part due to differences in local conditions. In some school systems it has been customary for years to departmentalize teaching in the upper grades and to some extent also in the middle grades — the fourth, fifth, and sixth — especially in the case of such departments as the fine arts, the industrial arts, and physical education. When such school systems adopted the junior high school plan they naturally organized the teaching in the new institution on a departmental basis. At the same time they manifested a very definite tendency to extend departmentalization within the middle grades. In consequence, pupils passed quite gradually from the one-teacher régime of the primary grades to the departmental plan in the junior high school, the transition being effected in the middle grades.

Gradual introduction of departmentalization inevitable in some junior high schools. Unfortunately many school systems did not have this wide experience with departmental

¹ *The Junior High School*, pp. 127-133.

teaching before adopting the junior high school plan. Indeed, many had little beyond limited departmentalization in the seventh and eighth grades. Accordingly it has been their contention, and rightly so under the circumstances, that departmental teaching should be introduced very gradually in the course of the junior high school period. Descriptive statements from two excellent junior high school systems in widely separated parts of the country will serve to illustrate the point of view and practices of school authorities who find it necessary to introduce departmentalization gradually:

Professor Douglass' statement. Professor Douglass, in speaking of the plan in operation in the junior division of the University High School at Eugene, Oregon, says:

The transition from room-teaching to departmental teaching . . . is accomplished by three successive graded steps. The Junior I class, "seventh graders," have a rollroom teacher who is with them half of their school day and is their adviser. This teacher is selected on the basis of her fitness to teach and influence children of this particular age and has always been one of successful experience in elementary-school teaching. . . . Only twice during the day do they have their class work in rooms other than their rollroom. Their quarters are farthest removed from the center of the building. When these pupils become Junior III's, "eighth graders," . . . they have rather complete departmental teaching, though one of their teachers is also rollroom adviser. Their classes will call them to other rooms several times during the day. When they become Junior IV's, "ninth graders," aside from their continuing under the rollroom teacher and organization, they work for the rest of their high-school career on the usual high-school plan of organization.¹

Assistant Superintendent Gule's statement. In describing the plan in operation at Columbus, Ohio, Assistant Superintendent Gule says:

¹ *Educational Administration and Supervision*, Vol. IX, pp. 40-41.

Some objection has been made to the abrupt change from the one-room, one-teacher plan to complete departmental teaching. In small junior high schools one teacher must teach several subjects. In larger schools it seems best to introduce departmental teaching gradually. In the seventh grade, we try to arrange our programs so that a pupil takes at least two, perhaps three, subjects with one teacher. Foreign languages and English make a good combination, English and history another.

Under the guidance of sympathetic teachers, it is surprising how quickly these young folks adjust themselves to the new plan and enjoy it.¹

Desirability of introducing departmental teaching gradually in the course of the middle grades. As indicated above, the best interests of children demand a gradual introduction of departmental teaching. As long as elementary work is carried on largely on a one-teacher basis, this task devolves of necessity upon the junior high school. It is increasingly conceded, however, that departmental teaching should be introduced gradually in the course of the middle grades — the fourth, fifth, and sixth — in the elementary school. This would not only improve the work of the elementary school, but it would prepare children for fairly complete departmentalization beginning with the junior high school grades. It is scarcely necessary to stress the fact that pupils of the middle grades would profit greatly through contact with several personalities and that promotion by subject would be distinctly advantageous for them. In discussing this problem in a recent article, Koos says:

The universal departmentalization in the grades of the junior high school must bring an appreciation of the value of at least partial departmentalization in the grades immediately below, with all that

¹ *N. E. A. Addresses and Proceedings*, 1920, p. 219.

this means for providing the conditions for better teaching. This appreciation had already preceded the junior high school, since we have had departmentalization much longer than we have had the latter, but the coming of the junior high school will accelerate development along this line. It is very likely that departmentalizing the intermediate grades will be accompanied by that feature of organization which has usually accompanied its introduction into junior high school grades, *promotion by subject*. While not as imperative for these grades, it is not without advantages for them, and some measure of adjustment resembling it will doubtless find place.¹

Fairly complete departmentalization essential to the best interests of the junior high school. Fairly complete departmentalization is obviously essential to the best interests of the junior high school. If the new institution is to function effectively in introducing pupils to the major fields of human endeavor, its teachers must have a thoroughgoing grasp of subject-matter, and this is practically out of the question in more than one of the major fields. Now and then an exceptionally able teacher might of course render effective services in a second field. As a rule, however, it is even in such cases distinctly wasteful to detract a teacher from his or her major field. A well trained modern language teacher might doubtless on occasion do commendable work in English, but modern language teachers who have an adequate command of the language, or languages, to be taught are so scarce in this country that it would be poor economy to detract them to other fields. Similarly, an able social science teacher might on occasion be diverted to English, or a general science teacher to mathematics, but here again really well qualified teachers are so much at a premium that diversion to other fields is not advisable.

Finally, limited departmentalization in the seventh and

¹ *Educational Review*, Vol. LXII, p. 314.

eighth grades is almost certain to interfere with promotion by subject. In so far as it does this, it must of necessity stand in the way of adequate adaptation to individual differences, and this alone constitutes a sufficient argument against any permanent plan of partial departmentalization in the junior high school.

ADMINISTRATION OF THE SCHEDULE

While practices relating to the administration of the junior high school schedule vary materially from place to place, there is ample evidence that standards in keeping with the major purposes of the new institution are in the making. Even now variation in practice is probably due more to transient local conditions than to persistent differences in point of view. Recent investigations throw considerable light upon actual practices and upon the general trend of such practices.

Briggs's findings regarding the length of the school day. Briggs found that the junior high school, along with the senior high school, tends to call for a longer school day than the elementary school. He summarizes the situation as follows:

The median net length of the school day in elementary schools of 239 places is 300 minutes; that for junior high schools in 269 places is 320 minutes; and that for senior high schools in 236 places is likewise 320 minutes.¹

The Denver Committee's findings regarding the length of the school day. The Denver Committee on Junior High Schools, which recently completed an investigation of ninety-five junior high schools located in sixty-three school

¹ *The Junior High School*, p. 239.

systems, found that the trend of practice was distinctly toward "a school day of about five and one half to six hours, with school opening from 8:30 to 8:45 and closing from 3:15 to 4:00," the time of closing being affected by the length of the noon recess and by the length of the class periods. Nineteen of the ninety-five answers indicated "a day longer than six hours." Where the day was five hours or less, it seemed "to be due to peculiar local circumstances, such as two schools occupying the same rooms, one in the forenoon and the other in the afternoon."¹

Smith's findings regarding number and length of periods. The number and the length of the periods into which the school day is divided vary materially as yet. Smith summarizes his findings in the case of sixty-four cities as follows:

The number of periods into which the school day is divided varies all the way from four to ten, the median being seven. The length of the periods extends from less than twenty-six minutes to more than sixty, the median being fifty.²

The findings of J. W. and J. H. Clement regarding the number and the length of the periods in Kansas. J. A. and J. H. Clement summarize their findings regarding the length of periods in Kansas junior high schools as follows:

Twelve schools have a recitation period of sixty minutes in length; four, of more than sixty minutes; ten, a forty-minute period; ten, a forty-five minute period; and three, a thirty-minute period. A little over half of the schools have a period of fifty-five minutes or longer.³

The Denver Committee's findings regarding the number and the length of the periods. The Denver Committee

¹ *Elementary School Journal*, Vol. XXIII, pp. 13-14.

² *Educational Administration and Supervision*, Vol. VI, p. 144.

³ *Ibid.*, Vol. VIII, pp. 140-141.

summarizes its findings in the case of the ninety-five schools included in the investigation referred to above, as follows :

Seventy-five of the schools have from six to eight periods per day, while the extremes are four and ten periods. Fifty-eight schools have periods ranging from forty-five to sixty minutes, while twenty-four have periods of forty minutes. In the majority of cases the time required for changing classes is included.

The number of class periods depends on the length of the school day and the length of the periods. The length of the periods depends to a considerable extent on whether time is set aside in each class period for directed study.

The noon period varies greatly in length, seemingly being governed by the local situation. Where pupils cannot go home for luncheon because of the distance, the lunch period is from thirty to forty minutes in length. In some instances supervised play or physical education is given during a long noon intermission.¹

Recommendations of the Denver Committee. On the strength of its findings in connection with this investigation supplemented by the judgment of local junior high school teachers, the vast majority of whom favored a school day of six hours or more, beginning at eight-thirty and closing all the way from three to three-thirty, the Denver Committee submitted the following recommendations to its constituents :

It is the opinion of the committee that the length of the school day should remain approximately as at present ; that thirty minutes be allowed for the lunch period ; that the day comprise six fifty-five minute periods with a period of thirty minutes (including passing-time) which may be used for assembly, advisory, or club period at the discretion of the principal ; and that supervised study be continued approximately one half of each period.²

¹ *Op. cit.*, pp. 14-15.

² *Op. cit.*, pp. 22-23.

Approximations to a desirable norm of practice. Such a school day, with the number and the length of the periods as indicated above, comes without question very close to a desirable norm of practice. Its only serious defect lies in the fact that the time allotment for advisory and extra-curricular activities is inadequate. These activities merit without question a full period each day. The coming junior high school day will therefore in all probability include, exclusive of a thirty-minute noon period, seven periods approximately fifty-five to sixty minutes in length and will extend over six and one half or seven hours. Such a school day is not excessive in length since it provides for all essential and desirable pupil activities, including study and extra-curricular activities.

SIZE OF CLASSES AND TEACHING LOAD

The results of recent investigations bring out the fact that the size of the typical junior high school class tends to fall almost exactly midway between the standards which have for some time been regarded as desirable for elementary schools on the one hand and for high schools on the other. In the case of elementary schools the standard has generally been set at about thirty-five and in the case of high schools at about twenty-five.

Dvorak's findings. Dvorak found in the case of eighty-six junior high schools located in various parts of the country that the "median number of pupils per section" was thirty for the seventh grade, twenty-nine for the eighth, and twenty-nine for the ninth. There was evidence, however, as might be expected under existing circumstances, of considerable variation in practice. In the case of the seventh grade the number of pupils per section ranged from

eight to sixty-five, the standard deviation from the median being ten; in the case of the eighth grade the range extended from eleven to fifty-five, the standard deviation from the median being twelve; and in the case of ninth grade the minimum was seven and the maximum seventy-six, the standard deviation from the median being twelve. Nevertheless, there was in evidence a strong trend toward a definite norm of practice, brought out not only by the median practices referred to above but also through other computations. Thus the percentage of schools with sections exceeding twenty-five pupils was 70 in the case of the seventh grade, 66.6 in the case of the eighth, and 65 in the case of the ninth; with sections exceeding thirty pupils it was 50 in the case of the seventh grade, 50 in the case of the eighth, and 45 in the case of the ninth; and with sections exceeding 35 pupils it was 25 in the case of the seventh grade, 32 in the case of the eighth, and 24 in the case of the ninth. In conclusion, Dvorak feels that the sections are too large to condition "a proper recognition of individual differences."¹

Empirical character of present standards of practice. As a matter of fact our present standards of practice regarding the size of classes are largely empirical. They are not to any considerable extent based upon experimental evidence. Indeed, until very recently it scarcely occurred to us that the scientific method might be applied to situations of this kind. There is ample evidence, however, that we have come to the turning point, and that we shall increasingly submit our administrative practices and standards to scientific scrutiny.

In proportion as we do this, we shall doubtless find it necessary to abandon many time-honored notions. Recent activities and investigations on the part of the North Cen-

¹ *School Review*, Vol. XXX, pp. 679-680.

tral Association of Colleges and Secondary Schools constitute a significant step in this direction.

Recent investigations of the North Central Association. The North Central Association, as is generally known, has for some years recommended twenty-five pupils per class as a maximum for high schools and has consistently frowned upon more than one hundred and fifty pupil hours per teacher. These standards were generally accepted as a matter of course. Recently, however, partly because of the growing demands which are being made upon high schools and partly because of the spread of the scientific movement in education, there has been an increasing disposition to question them. In consequence the whole situation is being submitted to scientific scrutiny. Three investigations have already been completed. Two of these, one statistical and the other experimental, concerned themselves "with the question of the most efficient size of the recitation class," and the third dealt specifically with the teaching load.

A statistical investigation concerning the most efficient size of the recitation class. In the statistical investigation the data were secured from approximately one hundred schools of all sizes located in all sections of the territory of the association. It consisted "of an analysis of the term marks or grades recorded in the principal's office during the first and second semesters of the school year 1921-1922 and the determination of the percentages of pupils receiving the several school marks (A, B, C, D, and E) in small sections (under twenty pupils), medium sections (twenty to thirty pupils), and large sections (over thirty pupils)."¹

An analysis of the results indicated "that the size of the class has little or nothing to do with the term grades."

¹ *School Review*, Vol. XXXI, p. 413.

Davis, under whose direction the investigation was carried on, summarizes the findings in part as follows :

A slightly greater percentage of the pupils enrolled in the large sections received A than of those in the small sections. In the case of the grade B, the size of the percentage is reversed, the small sections exceeding the large sections by 4 per cent. However, when the two superior grades, A and B, are taken together, the results are nearly identical for all three sections. Sixty per cent of the pupils in the small sections received these grades, while in the medium and large sections the percentage of pupils given one or the other of these marks is 57.

Similarly in the case of the low marks the differences in the percentages are not great. In the small sections, 13 per cent received either D or E; in the medium sections, 14 per cent; and in the large sections, 17 per cent.¹

An experimental investigation concerning the most efficient size of the recitation class. The experimental investigation dealt with "the term marks made by pupils organized into controlled groups." In describing this investigation, Davis says :

About twenty cities, well distributed in size and geographical location, participated in this investigation. Classes were definitely organized into small, medium, and large sections. Care was taken to secure comparable intelligence and achievement conditions in these sections. For the nine weeks, or one half semester, these comparable groups were, so far as possible, given identical instruction. At the end of the nine weeks, tests were given, and mid-semester marks were recorded. Data were available for 6,130 pupils. These pupils were instructed in 240 different class sections, 65 sections being small, 120 sections being medium, and 55 sections being large.²

The results of this investigation were much the same as those of the previous one. Davis summarizes them in part as follows :

¹ *Op. cit.*, pp. 413-414.

² *Op. cit.*, p. 415.

Of the A grades the small sections yielded 18 per cent; the medium sections, 16 per cent; and the large sections, 16 per cent. In other words, the small sections have a two-point advantage over the other two sections, which are tied for second place.

If the two highest grades, A and B, are considered together, no superiority is to be found for the small sections over the medium sections, each yielding 52 per cent of the highest grades. The large sections fall behind the small sections and the medium sections by the small difference of two points.

Likewise, if the two lowest marks, D and E, combined are considered as the basis of comparison, no important disadvantage is shown for any class sections, only two points separating the extreme sections. Moreover, the smallest percentage of the low grades is by this comparison found to be in the medium sections rather than in the small sections or in the large sections.

The conclusion from the second study concerning the size of classes is, therefore, precisely the same as the conclusion from the first study: The size of the class sections has no important effect on achievement of pupils' marks. Certainly this is true where the several types of school work are treated as a unit.¹

Practical bearings of the results brought out by these two investigations. The findings brought to light by these investigations strongly suggest, as Davis points out, the possibility of organizing our high schools "on the basis of many more pupils to the section than twenty or twenty-five." To what extent they are applicable to junior high school conditions must be determined experimentally. It is highly probable, however — especially with ability grouping, adjustment rooms, and directed study as aids — that junior high school teachers will be able to do about as effective work with groups of thirty or more as with groups below thirty. Certainly local circumstances will in many communities necessitate the larger groups for some time to come.

¹ *Op. cit.*, pp. 415-416.

Effect of size of class upon teachers. There is, however, as Davis further points out, another consideration, namely, "the effect of the size of the class on the teacher." In order to throw some light on this aspect of the situation, several questions intended to elicit the teachers' own reactions to varying sizes of classes were submitted in connection with the blank forms upon which the data for the experimental investigation were to be recorded. In summarizing the results, Davis says :

According to the replies, (1) the medium-sized classes yield both the most satisfactory immediate experiences and the most satisfactory term marks for the pupils, and conversely, the large classes yield the least satisfactory returns in both cases; (2) the medium-sized classes also yield the most satisfactory results to the teachers, although the large classes yield more satisfaction than the very small classes; (3) while the large classes are the most fatiguing to the teacher, the small classes are more fatiguing than the medium-sized classes; (4) most teachers (77.3 per cent) prefer to teach medium-sized classes, although some (4.7 per cent) prefer to teach large classes; and (5) a large percentage of the teachers (42.7 per cent) believe that if they could be relieved of outside work, such as the correction of papers, themes, and the like, large classes would not add appreciably to the teaching load. . . .

Whether these replies were dictated more by traditional bias than by careful reasoning is a fair query. Certainly teachers have been schooled by our association to believe that the smaller the class the greater the pupils' interest and achievement and likewise the greater the teachers' satisfaction. In the light of the present studies, ought not something be done to modify that opinion? Ought not, at least, more attention be given to discovering, by experimentation, the real facts of the case with respect to each teacher individually? At bottom, may not the problem be one of individual differences entirely? ¹

A specific investigation concerning the teaching load. The third of this series of investigations concerned itself specifi-

¹ *Op. cit.*, p. 418.

cally with the teaching load. In approximately one hundred North Central high schools each teacher was asked to keep an exact record of the expenditure of his or her time for one week. About eleven hundred teachers from ten different departments filled in the forms which were submitted. A tabulation of the returns showed that the time expenditure in regular school work, inside and outside of school, was approximately as follows: 4 per cent spent less than 300 minutes per day; 13 per cent spent from 300 to 400 minutes per day; 27 per cent spent from 400 to 500 minutes per day; 26 per cent spent from 500 to 600 minutes per day; 19 per cent spent from 600 to 800 minutes per day; and 11 per cent spent 800 or more minutes per day. Davis' comment on these findings is in part as follows:

On the face of the returns presented, therefore, the amount of time spent by teachers in definite school work ranges from 25 to 66 or more hours per week. It appears, however, that the typical teacher spends from 501 to 600 minutes per week in this way, or from 8 to 10 hours per day. Certainly when the nature of the teacher's work is taken into account, the requirements make a heavy load.¹

Final conclusions and practical deductions. The final conclusions which Davis reaches and the practical deductions which he makes on the strength of the results brought out by these three investigations of the North Central Association are so significant from the standpoint of practice that we shall quote them in full. They are as follows:

1. *Conclusions:*

- (1) There is no necessary connection between size of class and efficiency of instruction as measured by pupils' grades.
- (2) Many teachers prefer to teach large classes, although the majority express themselves as preferring small or medium-sized classes.

¹ *Op. cit.*, p. 421.

- (3) The size of the class in and of itself is not a paramount factor in determining the equity of the teaching load.
- (4) If teachers could be relieved of some of the added clerical duties incident to large classes, greater numbers would prefer to teach such classes, and there would, moreover, be ample justification for the administrative authorities to assign at least some large classes to all such persons.
- (5) The North Central Association is not justified in demanding that for all teachers, in all types of work, the maximum size of class shall be no greater than thirty pupils, or that the maximum number of pupil-hours of instruction per day shall not exceed 150.
- (6) The most important determinants of the teaching load are:
(a) the personality of the class; (b) the number of different preparations for class work required daily; (c) the number of classes taught daily; (d) the amount of clerical work connected with the teaching process; (e) extra-curricular and extra-classroom school duties; and (f) social and civic demands.

2. *Practical deductions:*

- (1) Considerable economy can be effected by organizing at least some of the classes in the school as large classes and by putting in charge of these classes teachers who can effectively manage and instruct them.
- (2) Considerations of good administration demand that machinery of some sort be developed whereby teachers who are capable of instructing large classes, and prefer so to do, shall be discovered, trained, and promoted.
- (3) An obligation rests on school standardizing agencies to assist in dissipating the erroneous notion that large classes are always undesirable and should be avoided.
- (4) The teaching load should be adjusted on as scientific a basis as possible but with reference always to the ability of the individual to carry the burden.
- (5) Promotions and financial rewards should be graded in accordance with the size and the importance of the load carried.

- (6) An obligation rests on school administration officers to aid teachers in securing desirable living quarters and to assist them in finding opportunities for congenial social intercourse and suitable recreational diversions.¹

ABILITY GROUPING

A suitable educational environment for children approximately twelve to sixteen years of age demands, among other things, a careful adaptation of the work of the school, from the standpoint of both quantity and quality, to individual differences in interests, needs, and abilities. Since group instruction is not only necessary but in the case of the vast majority of children desirable, such adaptation necessitates very obviously the classification of children in ability groups. Ability grouping is, therefore, one of the major problems of the junior high school principal and his staff. In actual practice some progress has been made toward such grouping, but, on the whole, present practices constitute a mere beginning in the right direction. The real solution of the problem lies ahead.

Dvorak's findings. Dvorak recently sent a questionnaire to eighty-six junior high schools located in various parts of the country to determine current practices in providing for individual differences. Among other things, the schools were asked which of the following criteria were being used in dividing grades into sections: (1) mental tests, (2) teachers' judgments, (3) standardized achievement tests in subject-matter, (4) random selection, (5) sex, (6) school marks earned in previous grade, and (7) chronological age. In summarizing the results, Dvorak says:

¹ *Op. cit.*, pp. 428-429.

Analysis of the replies shows that 20 of the 86 schools base their classifications on one of the above criteria, 24 schools on two of the criteria, 22 on three, 11 on four, and 9 on five or more of the criteria. . . .

It is evident that eleven schools rely on random selection alone, while five schools rely on teachers' judgments alone as a basis for classification of pupils into sections. "Teachers' judgments" is listed fifty-eight times. In contrast with these are the criteria of mental and educational tests, which are used together with other criteria by twenty-one of the eighty-six schools. "Mental tests" is listed forty-five times.¹

Favorable sentiment revealed by Briggs's questionnaire. While many junior high school authorities have not as yet adopted scientific ability grouping in practice, there is evidence that the principle of such grouping is being regarded with increasing favor. Briggs found, in connection with the questionnaire investigation referred to elsewhere, that "the organization of groups homogeneous in ability is considered essential by 27.9 per cent of the judges, one third of the principals approving, and desirable by 96.7 per cent, all the superintendents and principals approving and only one representative of a state department indicating negation." ²

Need of a scientific technique for ability grouping. The chief problem confronting us at present is to develop a scientific technique for ability grouping. In other words, if ability grouping is to be administered effectively we must determine the factors which condition achievement and must devise ways and means of measuring them with some degree of accuracy. Thus far, attempts at scientific ability grouping have been based on the assumption that achievement is

¹ *School Review*, Vol. XXX, pp. 681-683.

² *Educational Administration and Supervision*, Vol. V, p. 296.

largely determined by intelligence as measured by mental tests. In actual practice administrators have usually found it necessary to supplement the use of intelligence scores with a variety of practical checks. In part this has been accounted for by the fact that mental tests constitute as yet approximate rather than final measures of intelligence. In part it is increasingly being accounted for by the fact that achievement is partly conditioned by other factors than intelligence — factors of which most mental tests take little or no account.

Breed and Breslich's experimental attack upon the problem. An experimental investigation recently carried out by Breed and Breslich at the University High School of the University of Chicago brings out in a very striking manner some of the major difficulties which those who are attempting scientific ability grouping, especially on the strength of mental tests, are likely to encounter. The investigation falls into two parts, the first concerning itself primarily with "the reliability of intelligence tests as the basis for determining the intelligence of high-school pupils," and the second more immediately with the reliability of such tests "as the basis for predicting the educational achievements of pupils."

The investigation was carried out during the school year 1920-1921, a group of sixty ninth-grade pupils having been singled out for intensive study and a group of fifty-four seventh-grade pupils for parallel and corroborative study. The intelligence tests selected — the Chicago Group Intelligence Test, Form A; the Otis Group Intelligence Test, Advanced Examination, Form A; and the Terman Group Test of Mental Ability, Form A — were chosen because they had been especially designated for the measurement of intelligence in secondary schools.

The first problem was obviously to determine to what extent these tests agreed among themselves. The correlations were found to be relatively high, the coefficients ranging from .69 to .85, the average being .77. This high correlation might easily be misinterpreted, as the investigators point out, if the analysis were not carried farther. The next problem was, therefore, to find out to what extent pupils would actually be displaced if they were grouped into sections on the strength of tests, the results of which agreed to the extent indicated. It was found that "the average intertest correlation" of .77 was accompanied by a pupil displacement of 30 per cent. In other words, 30 per cent of the pupils classified by one test were found to be out of place according to another. In most cases the displacement was, however, only to the extent of one section, there being "only six individuals whose classification by one test located them two sections away from their classification by another test."

Since the "series of scores" was "in each case not compared with a series of true scores but with a series subject to error," it was felt that the results might "convey a misleading impression of the reliability of the intelligence tests." Accordingly, the analysis was carried farther. "A series of composite intelligence scores" which "may be assumed to represent a nearer approach to the true values than any single series of scores, by the same argument that the average of several expert attempts at the measurement of an object probably approaches more closely the true measure than any one attempt, was derived from the three intelligence tests." On this basis, with an enrollment of twenty pupils per section, the average displacement for the three tests was found to be 18 per cent. "This means that

between one fifth and one sixth of the pupils were not properly classified according to intelligence by the test, as judged by the criterion of composite scores." As the investigators point out further, this percentage would be decreased somewhat by an increase in the size of the sections.

Since "it is important for the teacher and supervisor to understand the degree of unreliability of the tests, not only in terms of a certain expectation of misplaced pupils, but also in terms of the expectation of error in individual scores," a study was made of the "disparity in scores for the same individual" — that is, of the disparity of scores as derived from different tests. The results, together with their bearings, are summarized in the following paragraph:

The average disparity between individual scores for the same pupils in two different tests was found to be 6 points when measured on the Chicago scale, 11.1 points when measured on the Otis scale, and 13.9 points when measured on the Terman scale. An examination of the Otis-Chicago data revealed the fact that one sixth of the total number of pupils tested received scores differing from each other by 20 or more Otis points. This degree of variability in the results of measurement calls for great caution in the use of these tests for the purpose of classifying pupils according to intelligence. It would seem that no serious attempt at such classification should be made in any high school without the use of at least two good group tests, supplemented by additional testing where marked disagreement between tests is found.¹

The second part of the investigation, as indicated above, concerned itself with "the reliability of intelligence tests as the basis for predicting the educational achievement of pupils." It involved a variety of comparisons. In the first place the composite intelligence scores referred to above were compared with the results of certain school tests in

¹ *School Review*, Vol. XXX, pp. 51-66.

mathematics. The coefficients ranged between .30 and .40, "indicating no close relationship between the intelligence scores of the pupils, as represented by the percentile composite, and achievement in the school tests." The per cent of pupil displacement was computed next. In the case of the ninth-grade pupils, "classified by the intelligence composite into three sections, corresponding to the three sections in ninth-grade mathematics," 55 per cent were found to be displaced. In the case of the seventh-grade pupils, "classified according to the composite intelligence scores into two sections," 39 per cent were displaced. As the investigators point out, "if these school-test results are accepted as valid measures of achievement, the composite intelligence scores clearly do not constitute an accurate basis of classification."

In view of the possibility that the school-test results might have been influenced by local conditions, it seemed expedient to make a further study of the educational achievement of one of these groups of pupils. The ninth-grade group was selected for this purpose. Three additional achievement scores were secured, the first based on the previous achievement of these pupils in mathematics as determined at the beginning of the semester through arithmetical tests in computation and reasoning, the second based on mathematical achievement as determined at the end of the semester through a test composed of examples from the Hotz first-year algebra scales, and the third based on careful industry ratings made by the teachers during the semester. Thereupon, various correlations were computed. It is not necessary to report these in detail at this point. Suffice it to say that the Hotz examples yielded a "measurement more closely related to the intelligence composite" than did

the school tests, the respective coefficients being .56 and .31 ; that both tests, the school tests and the Hotz examples, gave " results fairly closely related to industry, with no appreciable difference in the closeness of the relationship " ; that each of these two tests showed " a closer relation to intelligence and industry combined than to either one of these factors alone " ; and that both arithmetical ability and a composite of arithmetical ability and intelligence scores were much more intimately related to the Hotz examples than the school tests.

In view of this more intimate relationship between arithmetical ability and intelligence on the one hand and the Hotz test on the other, the latter " was employed as a second criterion of educational achievement." The immediate problem was, " Which of the following, according to the foregoing data, would constitute the most satisfactory basis of classifying these pupils : (1) intelligence tests, (2) arithmetical ability tests, (3) intelligence and arithmetical ability tests combined," attention being " purposely confined to bases available at the beginning of high-school work?" As a matter of fact it had already been shown that arithmetical ability tests gave a " very unsatisfactory index of the later success of these pupils in mathematics." " Combining the arithmetical ability scores with the intelligence scores did not provide an appreciably more satisfactory basis of classification than the intelligence scores alone." In either case the percentage of pupil displacement, when checked against a classification according to the Hotz test, amounted to 51. " These data on pupil displacement," the investigators conclude, " confirm the conclusion reached, namely, that a classification of the pupils based on intelligence scores would be quite as satisfactory as a classification

based on a combination of intelligence and arithmetical ability scores."

Finally, it seemed desirable to compare the intelligence composite and the Otis test as bases for classification at the beginning of ninth-grade mathematics. The Otis test was, therefore, substituted for the intelligence composite. "The correlation between the Otis and Hotz scores was .53. The pupil displacement was 51 per cent, indicating no loss in accuracy."

The conclusions which Breed and Breslich arrive at on the strength of this investigation are so pertinent and so significant that we shall quote them at length. They say:

A displacement of 51 per cent in the foregoing case seems large. One may be inclined to think that measures of intelligence should forecast scholarship with greater accuracy. They probably would if intelligence and scholarship were accurately measured. Some psychologists, however, seem to believe that with perfect instruction and perfect measurement the pupil displacement in a case of this kind would be reduced to zero. On the basis of this view it has even been suggested that teachers be rated as efficient or inefficient according to the discrepancy between the intelligence and educational-achievement measurements of their pupils. The results indicate that there is no reasonable prospect of the success of such a scheme. Clearly, scholarship is not a matter of intelligence alone. It is a product, as well, of such powerful emotional factors as interest and such volitional factors as perseverance. These emotional and volitional elements, only slightly if at all measured by intelligence tests, remain outside the field of intellect, to hamper or quicken the progress of the pupil in any subject. Not only does the best psychological theory seem to demand that these two aspects of our mental life be distinguished from the functions of intelligence, but it seems further to support the view that a gift in one does not necessarily imply a gift in all. Will and emotions, apparently, can no more be produced by facile instruction than can intellect.

The problem of classifying pupils by intelligence tests is obviously,

then, complicated by the following conditions: (1) imperfect instruments for measuring intelligence, (2) imperfect instruments for measuring educational achievement, (3) imperfect correlation between intelligence and interest, (4) imperfect correlation between intelligence, and will, (5) imperfect stability of the pupil, (6) imperfect instruction.

It seems probable, therefore, that the most accurate measurements of intelligence will not provide a reliable basis for classification under the most perfect school conditions. We have found that the Otis test failed to classify at least 13 per cent of a group according to their intelligence. It failed to classify 51 per cent according to their educational achievement. The inaccuracy in the measurement of intelligence does not account for all of the error in the second case. If the scholarship test in the second instance be assumed to have an error as large as that of the Otis test, and it is not conceded that it is larger, the disparity between intelligence and scholarship is not yet explained. There is good reason from these data to believe that other factors such as those enumerated are involved in the situation and make the problem a vastly more complex one than positing a perfect relationship between two abilities such as intelligence and scholarship and measuring one of them.

All one should expect from the group tests of intelligence is that they provide a preliminary classification, which will be subject to rectification as the scholarly ability of the pupils becomes known. This they did in the present study more economically than any other means tried, and otherwise as satisfactorily. Other things being equal, the accuracy of such classifications will probably increase considerably as the reliability of the measuring instruments, both psychological and educational, is increased.¹

Possibilities and limitations of mental tests for ability grouping. As indicated by Breed and Breslich's findings and conclusions, mental tests constitute without question the best technique for a preliminary classification of pupils into ability groups. Their chief limitation lies in the fact that they measure for the most part only intelligence and that they measure this as yet imperfectly. Regarding

¹ *School Review*, Vol. XXX, pp. 210-226.

emotional and volitional factors — factors which play a paramount rôle in human behavior and which must of necessity go far toward conditioning achievement — they tell us but little. These factors are, as Breed and Breslich point out, as much a part of the native equipment of the individual as is intelligence, and it would be quite as futile to try to create them as to try to create intelligence. How little this fact is appreciated may be gleaned from the many current discussions which assume so often that the failure of the so-called bright pupil to come up to expectations in achievement is due to inadequate stimulation or to lack of opportunity. As a matter of fact the disparity between mental scores and achievement will continue to baffle us until mental tests provide for a more adequate and representative inventory of the individual's native equipment.

The measurement of factors other than intelligence. Fortunately the necessity of taking account of factors other than intelligence is increasingly being recognized, and tests for the measurement of such factors are in the making. Dr. Frank N. Freeman, in a recent article on "Tests of Personality Traits,"¹ points out that these tests center mainly about four traits or factors, namely, will-temperament, emotional temperament, moral disposition, and æsthetic sensibility, "all fairly distinct from the processes of perceiving, understanding, and thinking, which are classified as intellectual processes." In characterizing these, he says:

Will-temperament designates the characteristics of the individual's overt reactions. Thus, a person may react to the stimuli of his surroundings energetically or weakly. He may in general react promptly or slowly. He may be persistent or vacillating. He may proceed cautiously or recklessly. His ideas may be carried out in action easily,

¹ *School Review*, Vol. XXXIII, pp. 95-106.

or there may seem to be a blocking or obstruction which must be overcome before the action can take place. . . .

Emotional temperament refers to subjective reactions as contrasted with overt reactions, which are classified under volitional temperament. Again, without attempting a precise definition, we may designate what is meant by illustration. We may pass judgment concerning emotional temperament when we say that one person is characterized by a prevailing mood of depression and another is subject chiefly to the mood of elation; when we say that one person is a confirmed optimist and another a pessimist; when we distinguish between an enthusiastic temperament and an apathetic temperament. All of these descriptions refer to the individual's prevailing feeling tone. This feeling tone is, of course, related to forms of expression in conduct, but the feeling tone and the conduct may be distinguished, and it may be possible and profitable to test them separately. . . .

Moral reactions may not be due to innate disposition, but it is at least a tenable hypothesis that individuals differ inherently in their sensitiveness to moral distinctions and in their disposition to subject themselves to moral conventions. Observation and a few preliminary experiments indicate that we are justified in describing some persons as trustworthy and others as untrustworthy. What constitutes a good person will, so far as specific conduct is concerned, differ from age to age and from nation to nation or from tribe to tribe, but conformity to the social code seems to rest upon a sufficiently general foundation that we may reasonably expect a person who exhibits this trait in one environment to exhibit it also in another. If this is the case, tests of moral disposition are possible. . . .

There is, perhaps, greater reason to doubt the existence of æsthetic sensibility as a general trait than to doubt the existence of the other three types of personality traits. It may well be argued that a person may have delicate susceptibility to merit in painting but not in music. He may appreciate beauty in literature but not in architecture. This involves one of the problems to be investigated. If it is possible to devise tests which will measure susceptibility in each of the special fields of æsthetic appreciation, it will be possible to determine whether this trait is a general trait or whether it is made up of a number of specific elements.¹

¹ *Op. cit.*, pp. 96-97.

The careful student of human behavior will admit readily that individuals differ tremendously with respect to such traits as are enumerated above. In ordinary school situations the differences are perhaps most in evidence in connection with responses associated with the first two of these traits, will-temperament and emotional temperament; and, as Dr. Freeman points out, we have reason to believe that these represent general behavior characteristics and not simply "particular forms of reaction to specific circumstances." There is ample evidence, further, that these traits are intimately related to achievement. This being the case, any sound technique for ability grouping must of necessity take some account of them. Thus far this has been done indirectly to some extent through such agencies as industry ratings of one kind or another and various combinations of mental tests. However, direct tests, such as the Downey will-temperament test, are rapidly coming into favor.

Indirect evidence tends to show that some so-called mental tests take much more account of these personality traits than do others, and that they take account of them in different ways. Thus scores based on a rather large and varied number of mental tests constitute apparently a much more reliable basis for ability grouping than do the scores of single tests. The experience of the Speyer Experimental Junior High School is typical in this respect. Dr. Van Denburg gives an excellent account of this in his recent book.¹

Ability grouping on the strength of mental tests was introduced in this school as early as 1915. For some time a

¹ Van Denburg, J. K., *The Junior High School Idea*. Henry Holt and Company, New York, 1922.

variety of tests were given but none of these proved entirely satisfactory. Van Denburg says :

In the opinion of those who studied the classification and grading of pupils at Speyer the tests of native mental ability were, on the whole, not measures but rather approximations of school success.

We came to believe that other factors not measured as yet were of great importance; for example, industry, system and regularity in home study, and a serious purpose in work are factors of almost as great importance as actual native ability.¹

More recently, however, under the direction of Leo H. King, a combination of tests has been worked out which constitutes in actual practice a very satisfactory basis for ability grouping. In describing the procedure and the results obtained, Van Denburg says :

On the basis of the measurements given us by King we divided the entering class pupils into a sequence of eight classes of approximately thirty-four pupils each. . . .

Seven weeks later we gave the same pupils a series of uniform examinations upon the school work they had covered since entering. As a result of our school tests we changed the classification of some twenty-five of our 275 entering pupils, placing each pupil whose general ratings in our subject-matter examination indicated the necessity of a change, with that class whose median rating in our examination was most nearly like his own.

After some twenty weeks of school work (actually in November, 1919) we gave another uniform set of school examinations to determine the relative progress of the eight classes of this same group. Again about twenty-five pupils showed by their general ratings that a change in class was necessary, and while these changes were under discussion the earlier ratings given us by King were reviewed. Imagine our surprise to find that each pupil whose latest record called for a change in class showed that he should be returned to the very class in which he was first placed by our earlier mental measurements and from which we had him taken twenty school weeks before. . . .

¹ *Ibid.*

We believe that while *all* standard psychological tests do not measure both ability and industry, certain combinations have done and will do this. At the present writing, sixty school weeks later, we have found no reason for changing any of these pupils from their original class groups.

The chief contribution made by King was the peculiar combination of tests designed to detect different abilities. There were nineteen different tests in all that were used and these were grouped into six different series.. The particular contribution that will be made in the future will consist in the manner in which the tests will be set up. This particular series included both verbal and non-verbal tests, in all the various forms which have been used by Otis, Thorndike, Terman, and others. . . .

As a result of these tests just discussed the teachers of Speyer School now believe that it is possible to make a classification of pupils on their entering week that under normal conditions should endure throughout their course.¹

SUPERVISED STUDY

It is not our purpose at this point to enter into a detailed discussion of the nature of supervised study. Suffice it to say that it implies in the broadest sense a conscious and persistent endeavor on the part of the school to see to it that the individual understands definitely what he is to do, that he knows either how to do the particular thing or how to find out how to do it, and that he actually does it to the best of his ability. If supervised study in this sense were generally in effect from the kindergarten through the university, a tremendous amount of human energy which now goes to waste would be directed into productive channels.

Although new from the standpoint of the technique which is commonly employed today, supervised study is, nevertheless, essentially as old as good teaching itself. Indeed, the two are at base quite inseparable. Good teaching

¹ *Op. cit.*, pp. 29-33.

implies above all the efficient direction of learning, and learning and study are in the last analysis synonymous.

The technique of supervised study. In its modern form, as adapted to group instruction in secondary schools, supervised study necessitates a rather definite technique. Thus far this has most often taken the form of (1) the double period, (2) the lengthened period, and (3) the divided period. Increasingly, too, it is taking such forms as (1) the study class, (2) the adjustment room, and (3) the opportunity room. Not infrequently the technique in use in a given school represents a combination of several of the forms enumerated above.

Desirability of double or lengthened period plans supplemented by adjustment and opportunity rooms. Wherever circumstances permit, the double or the lengthened period, supplemented by adjustment and opportunity rooms, constitutes by far the most desirable technique for supervised study in junior high schools. The double period is most commonly a sixty-minute period given over in about equal proportions to recitation and study. In the case of such subjects as the natural sciences, the fine arts, the industrial arts, and modern languages, the major portion of the period is not uncommonly devoted to directed practice in the laboratory, the shop, and the classroom. In a sense our whole conception of the recitation is of course undergoing a fundamental change, so that even in the case of the more academic subjects it is increasingly being given over to guidance rather than inspection.

In actual practice the double period plan, when properly administered, will meet the needs of the vast majority of pupils. Indeed, it will do this so effectively that there is little need of study outside of school hours. There is,

however, always a certain proportion of pupils who are more or less atypical, either in general or from the standpoint of particular subjects. On the 'one extreme such pupils represent abilities which are distinctly below par, and on the other extreme they represent abilities which are distinctly above par. Then, too, there is almost invariably a certain proportion of pupils whose school work is interrupted through unavoidable circumstances of one kind or another. It is desirable, therefore, that the double period plan should be supplemented by adjustment rooms for those who are, because of either unfavorable circumstances or inferior ability, unable to keep pace with normal groups, and by opportunity rooms for those who by reason of superior ability are able to achieve more than normal groups.

Wherever the double period plan is out of the question, there is of course much more occasion for such supplementary agencies as adjustment and opportunity rooms. Indeed, they become under such circumstances quite indispensable if those who deviate materially from the rank and file are to receive adequate attention. In part the situation is of course increasingly being taken care of through ability grouping, but even this is, in the case of the extremes, at best quite inadequate.

Difficulties encountered in introducing supervised study usually more apparent than real. The introduction of a definite plan of supervised study is usually beset by a variety of difficulties. It necessitates on the whole, especially in the double or lengthened period plan, a somewhat longer school day on the part of both pupils and teachers. And to this there is at the outset always more or less objection. Beyond this, it appears at first sight to involve added expense, since it decreases the number of periods which a

teacher may teach and increases the demand upon classrooms. Finally, all too often neither the teachers nor the community have been adequately prepared for the new departure in practice. Consequently, there is much needless opposition.

The fact of the matter is, however, that these difficulties are far more apparent than real. As far as the longer school day is concerned, this is quite offset by the lessened demands which the plan makes upon the extra-school time of both pupils and teachers. Indeed, wherever the double period plan has been properly introduced, there is no real occasion for home study on the part of pupils. Teachers, too, will find that the extra-school demands which are made upon them will as a rule not require more than a half day per week, surely a very reasonable requirement in the face of the fact that the five and one-half day week represents the most advanced practice in other fields of endeavor.

The fact that the double period plan tends to limit school work, both study and recitation, to a school day of reasonable length is one of the strongest arguments in its favor. Several decades ago there may have been some excuse for home study; today this is no longer the case, at least during the elementary- and secondary-school periods. It would be very difficult, indeed, to adduce a single sound argument in favor of an educational practice which compels school children to toil several hours each evening with their studies after having spent a rather strenuous day in school, while adults in all walks of life are limiting their serious activities increasingly to an eight-hour day. The sooner such a practice is supplanted the better, even at the expense of a somewhat longer school day than has been customary heretofore.

That the double period plan should increase school costs may seem reasonable at first sight since it decreases the number of periods which a teacher may teach and increases the demand upon classrooms. Upon further analysis, however, it becomes obvious that this, too, is more apparent than real. The reduction in the number of periods which a teacher may teach is compensated for in part by the fact that the plan enables him to care for a larger class than on the old basis, and still more so by the fact that the number of failures is reduced to a minimum. The increased demand upon classrooms, too, is compensated for in large part by the release of study halls.

Superintendent Cooper's findings. That a well organized plan of supervised study makes possible in actual practice such economies as we have indicated above and need not materially augment school costs is brought out in an interesting manner in a recent statement by Frank B. Cooper, who was for many years superintendent of the public schools of Seattle, Washington. He says:

Six years ago Seattle adopted the supervised study plan for the high schools. By lengthening the school day seventy minutes we have been able to offer seventy-minute periods for recitation and supervised study. The year following the introduction of the supervised study plan, reports from one of our largest high schools showed that pupils had carried more subjects than under the old plan and that the percentage of subject failures had decreased 16 per cent. We also found that the cost of offering science, manual arts, and general double period subjects had decreased over 30 per cent and that there was no increase in the cost of the regular academic subjects. In other words, our high schools, by means of supervised study, are operating at a less expense and our pupils carry more work with fewer failures than before.¹

¹ *N. E. A. Addresses and Proceedings*, 1921, p. 717.

That directed study has often failed because teachers and communities had not been adequately prepared for it in advance, may be freely granted. However, here again the difficulties are more apparent than real. Teachers may be trained in advance for the new plan, and communities, too, may be prepared for it through adequate publicity.

Conclusions of the Denver Committee. The Denver Committee on Junior High Schools, to which we referred in an earlier connection, after completing a survey of conditions and practices in other cities, undertook an intensive study of local problems in order that supervised study might be placed on a thoroughly sound basis. The general conclusions which the committee arrived at are very suggestive at this point. They are as follows :

The weight of opinion on the part of pupils, teachers, and principals is in favor of directed and supervised study during a part of the regular recitation period. The difficulties as set forth in the answers to our inquiries are administrative, as lack of room and teaching force which would permit of long periods, or lack of training of the teaching force, or a very indefinite conception of what direction of study should mean in its concrete application. It is also suggested that no very well defined technique of supervision has been developed, in spite of the number of courses which have been given and the books written on the subject. Our inquiries seem to suggest that our own teachers are by no means uniform in methods and practices in their supervision of study ; also that a considerable number of those in charge of the junior high schools have not had any extended experience in this field.

Fundamental interest, effort, laws of thought, correct assignment of lesson, and concrete application of these principles to class practice are old themes but are basic in the supervision of study.

It is recommended that the supervisory staff work out and present such courses to our junior high school teachers as shall bring about a clearer idea as to just what direction of study means, how it may best be carried on under schoolroom conditions, and how we may teach

pupils to study and to think. The teachers are anxious to have all of the assistance possible in this matter.

It is recognized that the proper supervision of study involves the whole teaching process and that teacher training will not solve the whole matter, but special instruction along this line will focus the attention of the classroom teacher upon the problems and help him to work out his individual solution.¹

Extent of supervised study in junior high schools. As might be expected, supervised study occupies an important place in junior high schools, and yet not to the extent that it should. Smith found that forty-four, or nearly 70 per cent, of the sixty-four representative cities which were included in his investigation devoted a part of the class period, frequently either a double or a lengthened period, to study under the direct supervision of the classroom teacher. However, fifty-one, or nearly 80 per cent, still either required or encouraged home study.² Of the ninety-five schools which were studied by the Denver Committee, seventy-four, or 78 per cent, devoted a part of the class period to supervised study. The time given over to such study was "approximately one half of the period" and ranged as a rule all the way "from twenty to thirty minutes per period."³ Clement found that 75 per cent of the junior high schools in Kansas and Indiana had supervised study of "one type or another."⁴

The need of supervised study in junior high schools. In a school system organized and administered on a scientific basis, supervised study in the broad sense of the term ought to begin the moment that the child enters the kindergarten, and it ought to continue in appropriate form until his educa-

¹ *Elementary School Journal*, Vol. XXIII, p. 34.

² *Educational Administration and Supervision*, Vol. VI, p. 144.

³ *Op. cit.*, p. 15.

⁴ *School Review*, Vol. XXX, p. 114.

tion terminates. In actual practice few school systems are as yet organized on a thoroughly scientific basis. In consequence, pupils receive in most cases all too little training in study before entering the junior high school. Indeed, the traditional method of organizing and administering instruction in elementary classrooms tends to prohibit in a rather effective manner any attempt to teach children how to study. The classes are almost invariably divided into two or more sections, and the teachers devote practically their entire time to hearing recitations. While one section recites, the others are supposed to study. Until elementary schools organize and administer their instruction on a basis which will enable teachers to supervise and direct study, children will continue to reach the junior high school with very meager equipment for real study.

This being the case, there is obviously a peculiar need of supervised study in junior high schools. This need is of course further intensified by the peculiar characteristics and needs of the junior high school age. The early adolescent with his ever expanding interests and his growing eagerness for action is, in the classroom as elsewhere, peculiarly in need of guidance and direction. Only under the influence of these is he likely to acquire the more useful and desirable forms of behavior.

Analysis of study equipment of junior high school pupils in Rochester, New York. That we have in no way exaggerated the need of supervised study in junior high schools is attested in an interesting manner by the results of a recent investigation reported by Mr. Charles E. Finch, Director of Junior High School Grades in Rochester, New York. The investigation was undertaken in order that the school authorities might utilize to the greatest possible advantage

the longer periods and the lengthened school day which came with the adoption of the junior high school plan. Four rather specific study tests were given to the seventh-grade pupils, the first designed to test their ability to get information from the printed page in response to questions, the second designed to test their knowledge of "the meaning of certain expressions found in the text and used by them" in answering the questions in the first test, the third designed to find out whether they knew how to use a book, and the fourth designed to test their ability to "bring out the important things told in a paragraph," to "write intelligent questions about a paragraph," and to "collect the information suggested by a simple outline."

It will not be necessary to report in their entirety the results of these tests. The reader will get a fair idea of the findings from the following summary statements by Mr. Finch. He says:

By comparing the results of Test No. I with the results of Test No. II, teachers have come to realize, as never before, that it is easily possible for children to give apparently good recitations and yet not have any adequate idea of what they are talking about.

A summary of the results of Test No. III based on the efforts of 256 pupils shows that —

- 58.9 per cent did not make use of the table of contents;
- 49.5 per cent failed to use the index;
- 29.6 per cent failed to discover that there was a list of maps;
- 21.4 per cent could not locate the appendix;
- 27.3 per cent had no idea of the real meaning of a footnote;
- 23.0 per cent could not find the paragraph headings on a given page;
- 65.7 per cent were unable to discover how the author of this particular textbook provided definite references for their help and guidance.

Some idea of the tremendous waste taking place when these students were endeavoring to find information on topics assigned

may be gathered from the following answers to question 2, Test No. III ("On what pages do you find information about John Smith? Tell how you found these pages.") :

"I looked the book through and through."

"I hunted up the pages."

"I found it going through from one page to another."

"By looking almost the whole book through."

"By taking one page at a time."

That pupils form strange ideas about things concerning which they are not properly informed may be gathered from answers to question 5, Test No. III. This question referred to a reference figure "2" that occurred in the paragraph after the word "thought" in the expression "Columbus had thought." The following answers were given in reply to this question :

"It means Columbus thought twice before speaking."

"The figure '2' means Columbus thought twice."

"It means twice as much water as land."

"It makes 'thought' plural instead of singular."¹

Remedial measures adopted by the Rochester school authorities in consequence of these findings. The remedial measures which the Rochester school authorities adopted after the results of these tests had been carefully studied will prove very suggestive to those interested in the effective direction and supervision of study. Mr. Finch summarizes them as follows :

1. Following the study tests, special practice was given in the use of the index, table of contents, references, and other means of using the textbook.

2. The following types of directions, given as part of the assignment, helped pupils to study more effectively :

- a) Using the text on your school desk, make a list of the pages on which any information is found concerning Marco Polo.
- b) Read all references found in the index concerning the first topic in the lesson.

¹ *School Review*, Vol. XXVIII, pp. 220-226.

- c) Write a statement giving paragraph heading and page where reference to the mariner's compass is found.
 - d) Write an original question based upon the second topic in today's lesson.
 - e) Verify your work by using Gordy's *American Beginnings in Europe*.
3. Several periods during the term were spent in reading the text with the pupils, who were called upon to give the meaning of phrases and sentences in their own simple vocabulary.
 4. Corrected study tests were given back to pupils and discussed.
 5. Pupils' questions were discussed by the class, and those of minor importance were rejected.
 6. Drill was given in the use of chapter, section, and paragraph headings.
 7. Frequent use was made of coöperative outlines to enable pupils to summarize their thoughts and select important facts.
 8. Definite references were given in the assignment to particular paragraphs or sections which pupils were asked to read and then to tabulate the important facts that furnished desired information.
 9. Much more attention was given to ascertaining whether pupils understood adult expressions used in our textbooks.
 10. Pupils were required to prove their statements by reference to the textbook. This helped to secure accuracy of statement, to prevent careless habits in reading, and to make the students more gracious in acknowledging their own mistakes.
 11. Practice was given in using the textbook to find definite information suggested by a carefully prepared outline.¹

EDUCATIONAL AND VOCATIONAL GUIDANCE

Guidance a basic function of secondary education. While guidance is in a large sense the paramount function of all education, it is peculiarly the function of secondary education. It is during the secondary period that the individual begins to effect his orientation with reference to the complex social world in which he must presently play

¹*Op. cit.*

his part as a full-fledged citizen. And such orientation can be effected economically only under the influence of genuine guidance.

As is evident from our statement of the purposes of the junior high school, such guidance must begin early. Indeed, during the earlier years of the secondary period, the junior high school years, all else must be subordinated to this one function. Without guidance in the larger sense, there can be no suitable educational environment for children twelve to sixteen years of age; nor is it possible without it to democratize the school system in any real sense of the word, or to effect genuine economy of time in education. *Guidance is, then, the very keystone of the junior high school idea.*

This does not mean of course that guidance is a matter of small moment during the later years of the secondary period. On the contrary, the need for guidance continues uninterruptedly throughout the period. Each successive year calls for changes in emphasis and procedure, since guidance, when properly organized and administered, is distinctly progressive and sequential. Brewer, in discussing in a recent article the aims and methods of vocational guidance, enumerates the following steps, the last three of which fall obviously for the most part within the later years of the secondary period:

(1) Gaining broad and useful experience that will discover and try out one's interests and abilities; (2) studying the opportunities and the problems of the occupational world; (3) choosing a vocation; (4) preparing for the occupation; (5) beginning work; and (6) securing progressive readjustments and promotions that will obtain a satisfactory vocational status in life and an American standard of living.¹

¹ *Educational Review*, Vol. LXII, p. 23.

Much the same thing is of course true of educational guidance. It, too, is distinctly progressive and sequential when properly organized and administered.

Present status of guidance in secondary schools. The results of two recent investigations, one concerning itself chiefly with the four-year high schools and the other with junior high schools, throw considerable light upon the actual status of guidance in secondary schools.

McDougall's investigation of vocational guidance in high schools. In general, the results of this investigation show that four-year high schools have made rather limited progress toward genuine vocational guidance. McDougall sent a questionnaire to some 290 high schools in 39 states in order to determine the extent to which vocational guidance had been accepted in practice and the manner in which it was being administered. Of the 39 states thus approached, 7 failed to reply and 9 indicated that nothing was being done in vocational guidance. Moreover, in the case of most of the states not over 50 per cent of the schools approached replied. All told, only 130 schools replied in such a manner that the returns could be used for purposes of final compilation.

The results indicate, further, that even those schools which are interested in vocational guidance and have made some progress toward its realization have not as a rule arrived at anything like a genuine scheme of vocational guidance. They are for the most part feeling their way. In consequence, practices vary greatly from school to school. Thus of the 130 schools referred to above, 97 of which offered specific vocational courses, only 54 had "available for use anything like a scientific survey of local industries and occupations." Only 34 schools were found to give a distinct

course in "vocational civics" or in "occupations." Only 51 schools had a director or special teacher responsible for vocational guidance, and only a slightly larger number required or urged their teachers to act in the capacity of vocational counselors. Only 45 schools reported "positive coöperation with parents" in guidance. One hundred and five schools were found to keep accurate scholarship records on file, but only 65 had anything like cumulative vocational and character estimates of teachers on record for purposes of vocational counseling and placement, and only 51 schools indicated that they kept records after placement. Finally, only 36 schools were using mental tests in determining vocational aptitudes.¹

Edgerton's investigation of guidance activities in junior high schools. The results of this investigation indicate quite clearly that junior high schools throughout the country have taken guidance rather seriously. There are of course exceptions, but for the most part in the case of schools which do not as yet merit the name junior high school. Edgerton, Supervisor of Vocational Information and Guidance in Detroit, Michigan, set out with the general assumption that the rapid growth of junior high schools "represents a serious attempt in helping all children, regardless of their social status or possible life work, to meet the new and changing demands for many-sided service as members of families and of vocational and civic groups." He says:

In other words, this reorganization of upper-grade curricula aims to use all of its available resources in preparing children to make proper choices and adjustments and to help determine their own future careers. Consequently, these schools are concerned with the number of boys and girls whom they succeed in encouraging to remain in

¹ *Industrial Arts Magazine*, Vol. XI, pp. 133-135.

school for training until they are sufficiently well prepared to choose and enter professional, commercial, industrial, household, and agricultural occupations adapted to their likes and abilities. These objectives assume that both social and psychological needs of early adolescence should be respected by giving appreciative insight into a sufficient number and variety of representative experiences to try out, discover, and develop natural aptitudes and ability for understanding and doing, as well as managing and supervising human activities.

Despite the recognized need for providing adequate guidance to assist individuals in deliberately and intelligently choosing both educational opportunities and life occupations, constructive criticism should continue to be directed toward those practices which force unreliable information and unwarranted decisions upon either children or adults. Present-day complexities resulting from the many changes in our social and economic development demand that, at least, adolescent pupils no longer be required to base such important decisions and adjustments upon mere opinion or meager data. In keeping with this belief, an increasing number of school systems are attempting to furnish all junior secondary school pupils with accurate knowledge concerning the relative opportunities and requirements in the social, economic, and larger personal aspects of the various life callings.¹

Specifically, Edgerton found that 301 out of 379 junior high schools in 21 states favored this type of vocational and educational guidance. While there were certain differences of opinion regarding the manner in which the general objectives of guidance might be accomplished most advantageously, practically all were agreed that exploratory or try-out activities were fundamental. Edgerton says in part :

Nearly all concerned are agreed that an effective system of diversified try-outs for seventh-, eighth-, and ninth-grade pupils should provide a basis for the kinds and qualities of knowledge and skill (or dexterity) which will help pupils to establish those habits, atti-

¹ *Education*, Vol. XLIII, pp. 174-175.

tudes, and appreciations that contribute most to their daily conduct as intelligent citizens, consumers, and producers.¹

Regarding the general character and the purposes of these try-out courses in junior high schools, he says :

In the most progressive of these schools much of the equipment, the materials, and the technique are chosen from important life occupations, but — with few exceptions — the purpose of the different try-out courses is not primarily to produce skilled workers for definite pursuits. The chief emphasis during this period is rather to help all pupils to develop perspective and reasoning power in connection with life situations by securing a basis for purposeful election of courses, proper choices of occupations, and later adjustments in employments. The best of these courses not only include contact with typical materials, equipment, and methods, but also are organized with the intention of (1) giving a broader appreciation of economic production and demanding more respect for the various workers and their work; (2) preparing for intelligent judgment and use of resources, products, and service; (3) helping to develop insight and to promote more worthy citizenship; (4) offering opportunity for testing the interests and aptitudes of students, in both positive and negative ways, in order that worthy needs and capacities may be developed through specific training.²

The scope of guidance in junior high schools.³ In an earlier paragraph we referred to Brewer's statement of the

¹ *Op. cit.*, p. 175.

² *Op. cit.*, p. 177.

³ The Holmes Junior High School of Philadelphia has probably gone farther than any other institution of its kind in the elaboration of a guidance program in the broadest sense of the term. Mrs. Emma V. Thomas-Tindal, the principal, and Jessie DuVal Myers, one of the instructors, give a most interesting and valuable account of this in their recent book, "Junior High School Life" (The Macmillan Company, 1924). They discuss in some detail seven phases of guidance—namely, "physical, curricular, social, vocational, civic, avocational, and ethical guidance." Each of these phases of guidance—phases paralleling the seven cardinal objectives of secondary education—has been "tried out with a considerable degree of success at the Holmes School."

six steps in the vocational progress of an individual. The first three of these steps — (1) gaining broad and useful experiences that will discover and try out one's interest and abilities; (2) studying the opportunities and the problems of the occupational world; and (3) choosing a vocation — represent essentially the scope of guidance in the junior high school.

The fact that these steps stress the vocational aspect of the situation makes them no less applicable to the problem of guidance as a whole. All junior high school pupils are, or should be, looking toward definite careers. For the less fortunate, these careers will be definitely vocational upon leaving the junior high school, since they will enter upon their life work and will receive only such formal education thereafter as the part-time and continuation school facilities of the community may afford. In the case of the more fortunate, these careers will be educational in the form of rather definite courses pursued in the senior high school, and, in the case of a few, in the college and the professional school. In any case, however, quite irrespective of whether he is to be a plumber or an engineer, the junior high school pupil should be looking toward a career. He may not hit upon this career in the course of the junior high school period, and in some cases it may not be desirable that he should; nevertheless, he should be looking toward one. There should be purpose in what he is doing.

Under these circumstances it is obviously not desirable to try to draw a very clear-cut distinction between vocational and educational guidance during the junior high school period. It is the major function of this period to administer guidance in the broad sense of the word — guidance which is at once vocational and educational. We may, therefore, accept the first three steps in Brewer's statement

as representing essentially the scope of guidance in junior high schools. In exceptional cases it may be necessary to include also the fourth step — namely, preparation for the occupation — but only in exceptional cases. On this there is very general agreement throughout the country. A recent statement of the Boston school authorities is rather typical in this respect. It is as follows :

The intermediate school is not a trade school, nor an industrial, nor a commercial, nor a technical school. It is not a vocational school in any sense, but it performs a legitimate and useful function in furnishing the young pupil what he has seldom or never had in school, viz., an opportunity to experiment and explore in several fields of work, and to get worth-while training in the field which he ultimately chooses. It avoids any appearance of predetermining careers, but it does consciously aim to develop the power of intelligent choice on the part of every pupil. Thus it facilitates the transition to a general or a special high school, to a vocational school, or to the child's prospective field of industry. In any case, the gap is bridged.¹

The agencies or means of guidance. Among the agencies most commonly employed in guidance are : (1) exploratory and try-out courses ; (2) study of individual traits, through (a) cumulative records, (b) mental tests, and (c) responses to different school situations ; (3) analysis of the social and economic background of the individual ; (4) excursions ; (5) the class in occupations ; (6) the vocational counsellor ; and (7) the advisory period. We shall discuss these agencies in the order in which they appear.

Exploratory and try-out courses. As repeatedly stressed heretofore, exploratory and try-out courses constitute one of the most important agencies for guidance during the junior high school period. Above all else the early adolescent

¹ "Report of Survey of Intermediate Schools and Classes." Boston Public Schools, *School Document No. 19*, 1920, p. 10.

needs to explore the several fields of human knowledge and to try himself out with reference to the various fields of practical endeavor. Other agencies for guidance become effective only in proportion as he has the opportunity to do this. This being the case, the whole program of studies must be organized with special reference to the function of guidance. The academic subjects should be, as indicated earlier, organized on a general basis so as to make possible a maximum of exploration and try-out. The practical subjects, too, should be organized on a general basis at the outset in order that the individual may get the largest possible outlook upon the great world of practical endeavor and that he may try out his vocational aptitudes.

As indicated elsewhere, some progress has been made toward the organization of general survey courses in the academic fields, though not to the extent that is desirable. Beyond this, the greatest progress toward the organization of subject-matter for purposes of exploration and guidance has been made in the field of industrial arts for boys. Wyatt, in a recent article, characterizes the practices of the larger junior high schools in this respect as follows :

As worked out in the larger junior high schools, a number of shops — eight seems to be quite generally accepted as the proper number — are equipped each for teaching a separate trade. A skilled workman of the corresponding trade is in charge of each shop. Students are rotated through these shops, a half semester in each shop, so that at the end of a two-year try-out period they have sampled eight industrial occupations. . . .

The subjects which have been most widely used are architectural and mechanical drawing, printing, sheet metal, bench metal work, pipe fitting, photography, electricity, concrete, forging, bookbinding, painting and interior decorating, and carpentry and cabinetmaking.¹

¹ *Industrial Arts Magazine*, Vol. XII, pp. 191-192.

The following account of the manner in which these exploratory and try-out activities in industrial arts for boys are carried on in the Jordan Junior High School of Minneapolis affords a striking illustration of the progress which individual schools have made in this direction. A. F. Benson, the principal, says :

At the Jordan Junior High School we are, at the present time (1921), offering for boys the following lines of work : woodwork, printing, sheet metal, agriculture, electricity, and mechanical drawing. During the first year the boy has an opportunity to work for six weeks in each one of these departments, during which time the instructor observes the boy very carefully. There are reactions as he passes from one line of work to another. The boy himself is observing and registering his own ideas as he passes from one shop to another. At the end of the first year, pupils are asked to select three lines in which they wish to work during the second year. As indicated above, in individual cases a boy may select one line rather than three. In such cases the industrial work for that individual boy becomes more and more of the vocational type. Whatever is for the best interests of the boy, that we do, irrespective of any plan we lay down or any "red tape" that may have wound itself around our organization. First, last, and always, the boy is to be considered rather than any preconceived plans of adults. In this try-out work we include the work on a typewriter. The commercial work of a junior high school is, and I believe ought to be, on a shop basis. It is just as important that a pupil find out early that he does not want to operate a typewriter, as it is to find out that he *does* want to operate such a machine.

In the third year of junior high school, or the ninth grade, pupils may select one of the following three courses : academic, industrial, commercial. If they select an industrial course, as a great many of them do, they may then select the shop in which they wish to spend all the time given to industrial work during the year. . . .

During the first two years everyone is required to take some form of industrial work. The type of industrial work in the second year is very largely optional, while in the third or last year it is entirely optional.¹

¹ *Industrial Arts Magazine*, Vol. X, p. 340.

Unfortunately, much less progress has been made toward a similar reorganization of industrial arts for girls. The same thing is true of the fine arts for both boys and girls. However, it was to be expected that exploratory and try-out activities should begin where they did, and that the initial emphasis should have been placed there, since the need was clearly most obvious at that point. Now that the principle as such has been rather well worked out in one field, it is to be expected that it should spread rather rapidly to other fields where it is urgently needed as a foundation for genuine guidance.

Finally, it must not be overlooked that the exploratory and try-out movement harbors, in spite of its basic soundness, certain dangers. Especially is there danger that the activities as such may become formalized from the standpoint of content, form, and sequence, and that we may come to look upon them as ends rather than means toward ends. The moment that we begin to require all boys, or all girls, to pass through the same general exploratory and try-out routine, irrespective of the extent to which they may or may not have found themselves, we shall begin to miss the real intent and purpose of the exploratory and try-out principle. The fact of the matter is that some children find themselves much more easily and much sooner than others. This being the case, the individual must be the point of departure and the point of reference in exploratory and try-out activities, and not the activities as such or the schedules. Above all, then, these activities must be administered on a thoroughly flexible basis.

Study of individual traits. Since the individual constitutes the point of departure and the point of reference in guidance, individual traits must be carefully observed and

studied. This may be done in a variety of ways. In the first place there should be available a cumulative record for each pupil when he enters the junior high school. Such a record affords valuable information regarding the past responses and achievements of the individual. These responses and achievements of the past in turn throw much light upon the real interests and capacities of the individual and upon his probable future achievements. Beyond this, mental tests constitute an indispensable means of studying individual traits. Finally, individual traits may be studied in a most effective manner through careful observation of the responses which the individual makes to the many and varied school situations. These responses — responses to studies, to classmates, to play, to difficulties — not only throw much light upon his intellectual traits, but they also afford valuable information regarding his emotional and volitional equipment.

Analysis of social and economic background of the individual. Accurate information regarding the social and economic background of the individual is of course quite indispensable for guidance. Other things being equal, the social and economic status of a family has much to do with the probable educational future, and consequently with the prospective educational careers, of its children. It is of the greatest possible importance, therefore, that all legitimate information regarding the educational and cultural level of the parents, their points of view, their traditions, their ambitions, their willingness to sacrifice for the sake of their children, their social setting, their occupations, and their actual and potential resources, should be accessible to the school. In the absence of such information, guidance is at best superficial.

The class in occupations. The class in occupations is obviously quite indispensable in connection with the second step in vocational progress enumerated by Brewer, namely, studying the opportunities and the problems of the occupational world. Exploratory and try-out activities are, in spite of their basic character, quite inadequate in themselves. If the individual is to find himself to the best possible advantage from the standpoint of his interests and capacities, he must clearly do much more than merely try himself out with reference to certain general occupational fields. He must find out what the potential occupations in these fields are, what exactions and demands they are likely to make, what rewards they offer, and what their relative significance is. This he may do most effectively through the class in occupations. In discussing this class in a recent article, Schultz says:

The vocations or "Life Career" classes, as they are sometimes called, should be a required part of the junior high school course, just as English or mathematics, and credit should be given for them. Such classes should be taught by a teacher of some years of successful experience who is in full sympathy with adolescent children . . . and has a broad and comprehensive view of the vocations, knowing where and how to secure the details. The vocations classes will of course be segregated, and topics appropriate to each sex will be freely discussed.¹

Excursions. Excursions to typical occupational establishments constitute without question an important agency for occupational guidance. The concrete situations with which the individual comes in contact on such excursions supplement in a significant manner the experiences gained through exploratory and try-out activities and the infor-

¹ *Op. cit.*, p. 244.

mation supplied by the class in occupations. They emphasize the thing as a whole, and the thing as a whole conveys impressions which cannot possibly come from the shop, or the classroom, or from the two together. Whenever possible and feasible, therefore, excursions to typical occupational establishments should be encouraged.

The counsellor. From what has been said thus far, it is evident that a sound program of guidance must necessarily make heavy demands upon time and effort. Moreover, it demands expert knowledge and skill. Not only must the various agencies for guidance be planned, directed, and coördinated, but individual diagnoses must be made and specific advice must be administered. Consequently, there is rapidly coming into being a new member of the school staff, the student counsellor. In speaking of the qualifications of this new official, Schultz says:

The counsellor should be an experienced teacher who is full of sympathy with the guidance movement; has a comprehensive view of life; is more or less familiar with psychological tests; and has the confidence of the school faculty and community, as well as that of the children. The school counsellor should not teach.¹

The advisory period. In the last analysis a large share of the burden in guidance must of necessity devolve upon the individual teacher. The counsellor can do little more than plan and coördinate and administer those situations which demand expert knowledge and skill. In consequence, many schools are setting aside one or more periods each week for pupil guidance under the immediate direction of the teachers. Eckert, in a recent article on the vocational and educational guidance program of the junior high school,

¹ *Op. cit.*, p. 244.

gives the following account of the advisory period as administered in the Latimer School in Pittsburgh :

The fourth kind of guidance may be given through conferences between the report teacher and her class. The school program at Latimer is so arranged that one period each morning, known as the activities period, is given over to the numerous activities in which boys and girls of junior high school age are interested. . . . Tuesday has been kept open for the report teacher to get acquainted with her home room class. She can learn about home conditions, about vocational plans and aspirations ; she checks up on pupils who are falling behind in other school work. She can often anticipate a case of dropping out of school and can aid the counsellor in retaining the child in school. Her work is extremely valuable. She comes to know more about the individual pupil than any other teacher in the building if she is sympathetic and tactful. She acts as advocate and mediator and can secure the confidence of the boy and girl, without which no plan of guidance can be successful.¹

THE LIBRARY

Rise and development of junior high school libraries. Although the junior high school is essentially a new institution, junior high school libraries have already assumed important proportions. According to the report of the Commissioner of Education there were 95 junior high school libraries with 56,973 volumes as early as 1917-1918. All indications point to a phenomenal growth since that time, although no definite statistics are available. In part the rapid rise and development of junior high school libraries is accounted for by the fact that the secondary school library movement as such reached tremendous proportions during this period, and in part it must be attributed to the fact that a junior high school in the real sense of the word is quite out of the question without adequate library facilities.

¹ *Industrial Arts Magazine*, Vol. XII, pp. 171-174.

Although the rise and development of junior high school libraries has been rapid and phenomenal, they did not come into being overnight. In most cases they began very humbly and reached their present status only by degrees. The experience of Los Angeles, where a good working library in charge of a trained librarian has become an integral part of each junior high school, affords an excellent example. These libraries began some nine or ten years ago "in a corner of a study room." Now each school has "a room devoted entirely to the library," and in many cases there are in addition several smaller rooms for specialized purposes of one kind or another. At first regular teachers were in charge of these libraries; then came trained part-time librarians; now each school has a full-time trained librarian. Books and materials, too, have come by degrees, increasing gradually to the point where some libraries possess from 5,000 to 6,000 volumes of usable books, as well as much valuable material in the form of pamphlets, clippings, and pictures. Functionally, too, these libraries have evolved in a striking manner from simple reference sources to elaborate coördinating centers of the intellectual activities of the schools.

The relation between junior and senior high school libraries. In general it may be said that there is no radical difference between junior and senior high school libraries. Such differences as exist are largely differences of degree. Both are secondary-school libraries. When properly organized and administered, the former will be adapted to the needs and interests of the early adolescent and the latter to the needs and interests of the later adolescent. Such adaptation, it should be borne in mind however, will call for no radical differences in housing and equipment or in the

general plan of administration. Upon the selection of books and materials, on the other hand, it will have important bearings, although there will be much overlapping even at this point. And to the extent that the early adolescent is less self-sufficient, it will obviously also affect the classification and arrangement of materials.

Functions of the junior high school library. The secondary-school library, be it in the junior or in the senior high school, has come into being largely in response to a new conception of the educative process. As long as it was the chief concern of the school to train the mind and to transmit formal knowledge, there was little need of libraries and laboratories; masters and textbooks were quite sufficient. But when the school began to modify its point of view, when it began to adopt as its primary objective the creation of an environment through which the instincts, impulses, and capacities of the individual might be organized into working interests and tools in the great world of men and affairs, the situation changed. It became necessary that the school should reproduce as far as possible the conditions of actual life. This implied not only an abundance of shops and laboratories but libraries as well, for, as Certain has well put it, "no other feature of school organization involves so much educational environment as does the library."¹

More specifically, the junior high school library must serve as (1) a source of reference, information, and recreation; (2) an agency to instruct and train pupils in the use of books and libraries; and (3) a great coördinating center for the intellectual activities of the school. In other words, it is the function of the junior high school library to supply pupils with a wide range of suitable reference and reading

¹ *Detroit Journal of Education*, Vol II, p. 15.

materials; to introduce them to the classification and arrangement of these materials in order that they may use them to the greatest possible advantage; and to coöperate with teachers and pupils individually and in groups, to the end that all school activities might derive a maximum of benefit from its resources and that they might in a measure find their coördination there.

Housing and equipment. As indicated above, there is no essential difference between junior and senior high school libraries as far as housing and equipment are concerned. The Committee on Library Organization and Equipment of the National Education Association and the North Central Association submits the same standards for both. The Detroit school authorities—who recently prepared, under the direction of C. C. Certain, elaborate library plans for junior and senior high school buildings—also make no distinction between the two. In actual practice, however, junior high school libraries doubtless often occupy inferior quarters, in large part because the schools themselves occupy as yet all too frequently remodeled rather than especially designed buildings. The trend is, however, distinctly toward standard housing and equipment wherever new buildings are being constructed. Certain characterizes the essential features of such housing and equipment as follows:

The library suite includes, therefore, not only a reading-room with open, accessible shelves, with its convenient magazine stands and newspaper racks, with its files of lantern slides, postal cards and visual materials of various kinds, with its cases of films for moving pictures, with its supply of records for victrolas, and with its carefully analyzed catalogues, indexes, and lists, but also the library classroom and the small conference rooms where pupils have actual experience not only in the use of books as tools, but also as a means of wholesome enjoyment combining the delights that come to persons associated in

the stimulating pastime of literary discussion. The small conference rooms are conveniently equipped for the use of pupils working on problems of a social character; they are important adjuncts to classrooms where pupils are engaged in carrying out projects of any kind. In addition to these rooms, there are the soundproof victrola room, the teachers' conference room, and the librarian's workroom. Classroom methods in the modern sense of the word cannot function adequately unless the school is provided with a library possessing the features that have just been outlined.¹

The Committee on Library Organization and Equipment of the National Education Association and the North Central Association holds that the library should be housed on the second floor whenever possible. The main rooms "should be provided with facilities to accommodate at one full period readers numbering from 5 per cent to 10 per cent of the total daily attendance of the school — an area of at least twenty-five square feet per reader" being "required for complete accommodation and service." Adjoining the main library room, there should be the librarian's workroom, the library classroom, the teachers' conference room, and the pupils' conference rooms. Certain holds that there should be, in the case of the larger buildings at least, six conference rooms for pupils, each approximately eight by twelve feet. Beyond this, it is of course quite essential that the library should be equipped with standard library furniture and apparatus. As far as possible this should be chosen under the direction of a trained and experienced secondary-school librarian.²

¹ *Op. cit.*, pp. 16-17.

² For detailed standard specifications consult the *Report of the Committee on Library Organization and Equipment of the National Education Association and the North Central Association*, especially pp. 11-16; also C. C. Certain's discussion of "Public School Libraries" in the *Detroit Journal of Education*, Vol. II, pp. 15-21 and 34-41.

Books and materials. If the junior high school library is to render effective services, it must be abundantly supplied with a wide variety of books, including encyclopedias, dictionaries, periodical indexes, and atlases, and also with maps, globes, newspapers, magazines, bulletins, pamphlets, clippings, pictures, victrola records, lantern slides, etc. As far as possible these books and materials must be selected from the standpoint of the needs, interests, and capacities of the early adolescent. In actual practice it is of course quite out of the question to build up a first class junior high school library out of material intended exclusively for pupils of this age. Much of the material will, therefore, be suitable only in part. The difficulties arising in consequence of this are by no means insuperable. Many teachers and librarians are dealing with them very effectively, the former by carefully scrutinizing reference assignments in advance, and the latter through extensive provision for analytics.

A proper classification of books and materials is of crucial importance to a junior high school library. The librarian faces the problem of classifying and arranging the books and the materials in a manner which is simple and non-technical and yet strictly in accord with standard library procedure to which pupils must gradually accustom themselves. If the classification is too technical, pupils will inevitably become confused and discouraged; and if it deviates too widely from standard procedures, they will fail to make progress in the right direction. Trained junior high school librarians are dealing with this problem in an admirable manner, most commonly through a judicious use of the Dewey decimal system of classification. They have also shown themselves highly adept in the classification and arrangement of clippings and pictures, both of which neces-

sarily play an important rôle in the modern junior high school library. Finally, marked progress has been made in the preparation of analytics. By means of these, pupils may readily find suitable references on a variety of topics.

The librarian. The librarian is of course by far the most important feature in a modern junior high school library. It is generally agreed that she should be both an experienced teacher and a trained librarian. Beyond this, she should be a woman of broad culture and deep sympathies, one who understands the early adolescent and knows how to deal with him. Wherever possible she should be a regular member of the faculty, occupying essentially the rank of a department head. According to the Committee on Library Organization and Equipment of the National Education Association and the North Central Association, there should be a full-time trained library assistant for every one thousand students in attendance "to help in the reference, technical, and clerical work, and to allow the librarian time for conference with teachers and pupils, to give instruction, and to visit classes."

Instruction and training in the use of the library. One of the most important functions of the junior high school librarian is to give instruction and training in the use of the library. Such instruction and training are quite indispensable if pupils are to use the library in an intelligent and skillful manner. Whether this is to be a very difficult or a relatively simple task will depend in a very large measure upon the nature of the training and the instruction which pupils have received in the elementary school. Pupils who have been brought up under a modern elementary-school régime will in the very nature of the case have ac-

quired much skill in the use of books and materials, as well as considerable familiarity with library procedure, by the time they reach the junior high school. They will, therefore, experience little difficulty in adapting themselves to the new situation and to the enlarged opportunities which it represents. Pupils who have been brought up under the traditional elementary-school régime represent a much more serious problem. Before reaching the junior high school such pupils have come in contact with little beyond textbooks and fiction. In consequence they know little about books and materials as sources of information and reference in connection with study, and even less about library procedure as such. In any case, however, it is the task of the librarian, always of course with the aid of the teachers, to familiarize pupils with the library and to train them to become skillful in its use. This demands systematic instruction and training.

The course of study on pages 398-399, prepared by the Committee on Secondary-School Library Problems of the Department of Secondary Education of the National Education Association, will serve to illustrate the nature of such instruction and training and the scope which it should cover during the junior high school years.

Coöperation in library administration. The librarian must in the very nature of the case assume the sole responsibility for many of the more technical aspects of library administration. In connection with many other aspects of the situation, however, she needs the closest possible coöperation on the part of the entire school. This is especially true in connection with such matters as the admission of pupils to the library, their work while there, the selection of books and materials, the preparation of analyt-

MINIMUM ESSENTIALS OF LIBRARY WORK BY GRADES
JUNIOR HIGH SCHOOL

GRADE	TIME ALLOTMENT 12 HOURS	OUTLINE OF COURSE
VII	1 hour	Card catalogue Complete use : Use of analytical entries Help in making reading lists References
	2 hours	<i>Reader's Guide</i>
	1 hour	Note-taking: Method and value Research: Method (How to look up a subject)
	1 hour	Review in use of books and library tools, here given on occasions of visits to public libraries, and discussions on public libraries as vocational aids
	6 hours	Reading: Stories of scientists, artists, musicians Stories of explorations, of pictures, of operas
		Discussions of public library facilities and needs Visits to branch and central libraries
VIII	3 hours	Reference books : Periodical and newspaper indexes Kinds available — e.g., agricultural, industrial, etc. <i>N. Y. Times</i> index <i>Reader's Guide</i> : Practice in use
	1 hour	Atlas, <i>Lippincott's Gazetteer</i> Note-taking, <i>Continued</i> Research, <i>Continued</i> (How to look up a subject) Making simple bibliographies
	8 hours	Reading : Stories of different sections and races of our country — e.g., <i>Ramona</i> , <i>Uncle Remus</i> , <i>Little</i> <i>Shepherd of Kingdom Come</i> , <i>Understood Betsy</i> , <i>Rebecca of Sunnybrook Farm</i>

MINIMUM ESSENTIALS OF LIBRARY WORK BY GRADES
JUNIOR HIGH SCHOOL—*Continued*

GRADE	TIME ALLOTMENT 12 HOURS	OUTLINE OF COURSE
IX B		Discussions on public libraries and needs Visits to branch and central libraries
		Review of grade VIII. Method of instruction to include continuation of: Note-taking Research (How to look up a subject) Simple bibliographies and how to use them
	1 hour	Comparison of dictionaries <i>Webster's New International</i> <i>Murray's</i> (briefly)
	1 hour	<i>Standard</i> <i>Century</i>
	1 hour	Brief discussion of dictionaries on special subjects — e.g., phrase and fable, classical dictionary — to show dictionary form of reference books
IX A	2 hours	Reading
	1 hour	Comparison of encyclopedias: <i>Britannica</i>
	1 hour	<i>New International</i> <i>Nelson's</i>
	1 hour	<i>Americana</i>
	1 hour	Brief discussions of encyclopedias on special subjects — e.g., literature, horticulture, American government — to show encyclopedia form of reference books
	1 hour	Discussion of public library facilities, with visits of inspection. Special attention to reference collection of special dictionaries and encyclopedias on special subjects

ics and bibliographies, and giving pupils instruction and training in the use of the library.

While institutional practices vary, pupils are most commonly admitted to the library either at stated periods or upon special permission from teachers. The practice of admitting pupils to the library only at stated intervals is rather artificial and scarcely in keeping with the functions of a modern junior high school library. Admitting them upon special permission from teachers when there is a real occasion for doing so is much better and much more in accord with modern educational ideals. Wherever this procedure is followed, pupils are usually required to register upon reaching the library, in order that their attendance may in due time be reported back to the classrooms.

The extent to which pupils profit by visits to the library depends of course in a very large measure upon the coöperation which the librarian receives from the teachers. It is obviously of the greatest possible importance that teachers should keep the librarian carefully posted in advance regarding classroom assignments which are likely to call for extended reference reading. Only in this way is it possible for her to marshal her resources and to have them in readiness when needed. It is also quite imperative that teachers keep themselves closely informed regarding the resources of the library as related to their departments. Without such information, library assignments are bound to be vague and indefinite. In return the librarian should of course keep the teachers fully informed regarding the arrival of new materials and the possibilities of resources already at hand.

While the librarian is obviously the book specialist *par excellence*, and as such should render the final verdict

regarding the selection of new materials, teachers may, nevertheless, render valuable aid at this point. They have in the very nature of the case a far more intimate knowledge of their respective fields than the librarian could possibly have. In consequence they are able to make recommendations which are bound to make for greater effectiveness in the selection of new materials.

Many departments are, moreover, in position to make valuable contributions by way of services and materials. The commercial department may type and mimeograph materials; the art department may prepare signs and posters, contribute pictures, and render general assistance in the selection and acquisition of art materials; the music department may contribute a wide variety of music materials, including sheet music, victrola records, pictures, and clippings; the physical education department may furnish photographs and clippings relating to athletic games and sports, to the great out-of-doors, and to health and hygiene; the dramatic and public speaking departments may supply a wealth of materials by way of pictures, accounts of important performances and contests, and outlines and briefs; the manual arts departments may contribute pictures, designs, blueprints, catalogues, and clippings.

The teachers of some departments may make valuable contributions by way of bibliographies. When regularly directed to the library, these soon accumulate and in time become of marked value to both teachers and pupils. The same thing is true of briefs and outlines. In the preparation of analytics, too, the teachers may assist the librarian by calling her attention to suitable topical references in books, periodicals, and newspapers.

Finally, the librarian needs the closest possible coöperation on the part of the teachers in giving training and instruction in the use of the library. This means of course that the teachers themselves must be thoroughly familiar with the library. In some junior high schools library instruction actually begins in the classroom, not infrequently in connection with one of the English classes, and the teacher may even go so far as to take the class to the library for definite observation and practice. In other schools the teachers are in close touch with the instruction and training given by the librarian and reinforce it in the classroom merely from the standpoint of their own departments. In either case excellent results are obtained.

A typical junior high school library. A brief description of one of the many excellent junior high school libraries in Los Angeles, the library of the Hollenbeck Junior High School, will serve to illustrate that much of what we have said regarding the possibilities of such libraries has long since passed the theoretical stage.

The Hollenbeck Junior High School, one of the finest institutions of its kind in the United States, was organized in 1911. At present it has an enrollment of approximately two thousand pupils. Up to 1915 — when Mrs. Emma Lee Gilmont, under whose direction the library has been developed, was appointed librarian — such library facilities as were available were administered by the teachers.

The library now occupies, aside from several accessory rooms, a "spacious room opening by French windows on to a broad sun porch." It has a seating capacity of 125 and is to be enlarged in the near future. It contains between 5,000 and 6,000 volumes of usable material, two thirds being non-fiction. There are nearly 250 volumes of bound

magazines. The books are classified according to the Dewey decimal plan. In addition the library possesses a vast amount of valuable material in the form of pamphlets, clippings, bibliographies, and bulletins.

Although pupils visit the library only on their own initiative, upon permission from their respective teachers, the seating capacity is taxed throughout the day. There is always excellent order, partly because of an effective system of pupil self-government, and partly because pupils usually visit the library with definite tasks in mind. They are, however, free to wander around the library premises, the only restriction being that they do not disturb anyone in their wanderings.

The librarian is an experienced secondary-school teacher and a trained librarian. She is, moreover, a mature woman of broad culture and deep sympathies. She understands the early adolescent and knows how to deal with him.

That pupils receive ample instruction and training in the use of the library is indicated in the following statement by Mrs. Gilmont:

The first step in the practical instruction in the use of the library is to give the first lessons in the classroom. The general make-up of the book is closely analyzed, the title-page, copyright date, table of contents, preface, and index are carefully explained, and exercises in the use of the table of contents and index are given.

These are followed by visits of the classes to the real workshop, the library. The students are taught the use of the dictionary, the encyclopedia, and other reference books. At this time, the use of the card catalogue is explained. An outline of the topics to be reported upon is posted on the bulletin board. I might add that these topics have been discussed by the teacher with the librarian and the books available in the library have been examined and only references which may be found in them have been given, so that the

student in looking them up in the catalogue may not be disappointed in finding them. . . .

Another plan that we use successfully is for the teacher to bring her class to the library, if it is not too crowded, and allow the students to select their reference topics and books and to take their notes under her supervision. The librarian is seldom called upon to lend her assistance, and the order in the library is in no wise disturbed.¹

As might be expected, there is close coöperation between the teachers and the librarian. "However necessary it may be," says Mrs. Gilmont, "for the librarian to keep in touch with pupils, an even closer relation with the teachers is imperative. Conferences with them must be frequent in order to become familiar with the methods used by them in presenting their subjects." Accordingly, the teachers not only take an active interest in the selection of books and materials and in the preparation of analytics and bibliographies, but they keep the librarian fully informed regarding their assignments. Beyond this, there is of course the closest coöperation in all administrative matters.

THE TEACHING STAFF

The teaching staff a crucial factor. It is generally conceded that the teaching staff is one of the most crucial considerations in junior high school organization and administration. Indeed, the leaders in the movement for the reorganization of our school system stressed the need of superior teachers for the adolescent age from the very outset. The same thing is true of those who led in the actual establishment of the first junior high schools. They were almost without exception keenly aware of the fact that the success of their undertaking was in a very large

¹ *Publications of the California Library Society*, No. 18, pp. 90-92.

measure conditioned by an able teaching staff. Consequently they made every effort to select and develop such a staff.

Nor has there been any disposition on the part of junior high school leaders to become less exacting in their demands for superior teachers with the passing of time. On the contrary, standards have constantly risen until they are now in many cases, as will appear increasingly, quite on a par with those for the senior high schools. The experience of Berkeley, California, as set forth in a recent bulletin of the Bureau of Education, illustrates this upward trend in an interesting manner. It is in part as follows:

When the junior high schools were established, a considerable number of the teachers were certificated to teach only in elementary schools of grades 1 to 8, inclusive. Sufficient time was given for those who desired it to secure regular or special secondary certificates, permitting them to teach in the ninth grade.¹ The general policy now is to require the secondary certificate.

Since the organization in 1910-1911 more than 250 teachers have served these schools. Of the 25 men and 88 women now in the junior high schools, only 35 have been here since their establishment. This shifting was due in large measure to the low wages paid prior to 1918, the result being an inability to hold many of our best teachers. Since that time, with the qualifications now required and with the same salary schedule as the senior high schools, 70 teachers have regular secondary certificates with the equivalent of five years of college work, 31 have special secondary certificates, 2 have the junior high school certificates which require the equivalent of four years of college work, and 3 have elementary certificates only. All are specialists in at least one subject. Berkeley has developed and is retraining a group of teachers of the highest rank in efficiency and *esprit de corps*.¹

Present status of junior high school teaching staff. Recent investigations and reports throw considerable light

¹ U. S. Bureau of Education, *Bulletin No. 4*, 1923, p. 16.

upon the present status of the junior high school teaching staff, from the standpoint of such criteria as sex, experience, training, certification, and salary.

Sex. It will be recalled that it was the ambition of the earlier leaders in the junior high school movement to increase the proportion of men on the staff. The results of recent investigations show that much less progress has been made toward this end than is desirable. Stayer found that of 1,519 junior high school teachers, representing ninety-nine schools in thirty-six states, 83 per cent were women and 17 per cent men. He says:

The proportion of men teachers in the junior high schools is small, being but slightly above that in the elementary schools and approximately one half that in the high schools of the country.¹

Experience. At the outset marked emphasis was placed upon experience, especially experience in elementary schools, as a prerequisite for junior high school service. This was to be expected, since maturity and experience of the right kind are peculiarly valuable where new and untried projects are being launched. Stayer's findings show that experience is still regarded as an important prerequisite for junior high school service. He says:

Of teachers now in junior high schools of the three-grade type, 44 per cent have had previous experience in grades 1-6 of the elementary school, and 48 per cent have had previous experience in grades 7-8 of the elementary school, while 30 per cent have had previous experience in the senior high school, and 69 per cent have had experience in the junior high school before this year. Considerable overlapping is obvious.²

Clement found similar practices in Kansas and Indiana. He summarizes them as follows:

¹ *School Review*, Vol. XXIX, pp. 379-387.

² *Op. cit.*, p. 382.

One of the most hopeful tokens on this point is that over three fourths of these teachers have had experience in teaching previous to their entrance upon junior high school instruction. These teachers come from the grades both above and below, but in much the larger numbers from the grades below. The fact that comparatively few inexperienced teachers have been employed in junior high schools tends to insure the success of instructional work. In the Kansas study only twenty-two teachers of a total of 460 were reported as inexperienced before entrance upon junior high school teaching. In Indiana twelve teachers of 304 were reported as inexperienced.¹

The most recent findings tend to show that as junior high schools are becoming more firmly established the emphasis is, as might be expected, gradually passing from experience to training. Foster, who recently addressed a questionnaire to the superintendents of some 75 city school systems and to approximately 50 universities and teachers' colleges, found this to be the case. He says :

Answers to the questionnaire indicate that in 45 per cent of the cases the junior high school teachers are drawn from the ranks of experienced elementary-school teachers, in 40 per cent from recent graduates of colleges and universities, and in 15 per cent from recent graduates of normal schools. However, most of the 45 per cent first mentioned above require that the teachers shall have supplemented their teaching experience with enough study to give them the vantage of at least three and preferably four years of study of college rank, with special reference to the junior high school field.²

Beyond this, Foster found that the direct transfer of teachers from the elementary grades to the junior high school was generally looked upon as a temporary expedient to be abandoned as soon as an adequate supply of specially trained teachers was available. In keeping with this, the

¹ *School Review*, Vol. XXX, pp. 110-117.

² *Educational Administration and Supervision*, Vol. VIII, pp. 349-354.

institutions which are preparing teachers for junior high school service reported that they were unable to supply the demand for such teachers. Finally, two out of every three superintendents stated quite specifically that they did not consider extended experience a prerequisite for junior high school teaching. More than 90 per cent of the superintendents stated, however, that the prospective junior high school teacher should do practice teaching while in training.

Training. At the outset there was a strong disposition in many parts of the country to select junior high school teachers largely from experienced normal-school graduates. This was particularly true of the teachers for the seventh and eighth grades. Ninth-grade teachers were more often chosen from the ranks of experienced college graduates. In most cases this method of recruiting the junior high school staff was very clearly looked upon as a temporary expedient to be abandoned as soon as a permanent staff of intermediate rank could be evolved. Subsequent developments bear out the assumption that the original method of procedure was in the nature of a temporary expedient, but they give little promise of a permanent staff of intermediate rank. The whole trend of the development has been, and still is, toward common requirements for junior and senior high school teachers. This does not mean of course that the training for the two classes of teachers will be identical in all respects. What it does mean, however, is that it will be quantitatively essentially the same.

Recent investigations indicate that junior high schools have already begun to make heavy demands upon college graduates. Stayer summarizes his findings in the case of ninety-nine cities as follows:

In schools of the three-grade type, 42 per cent of the teachers are college or university graduates, and 18 per cent have attended college but have not graduated — 60 per cent thus having had a complete or partial college training. . . .

Correspondence indicates that the common standards for the education of junior high school teachers are normal-school or college graduates for the seventh and eighth grades and college graduates for the ninth grade, with a desire to secure for all junior high school work teachers who have had both normal-school and college training.¹

Clement gives the following summary of his findings in Kansas and Indiana :

Considerable gain has been made in the matter of the academic and vocational training of both academic and vocational teachers. Differences of opinion as to the requirements and qualifications of junior high school teachers exist in the minds of different school men and women. The tendency is to demand more and more training. In general less than 50 per cent of the academic teachers have the bachelor's degree. The vocational teachers hold degrees in smaller numbers but in increasing proportion.²

The trend toward common requirements for junior and senior high school teachers is most strongly in evidence in the case of the larger cities which have had time to establish their junior high schools on a firm basis. We have already cited the experiences and the practices of Berkeley, California. Other California cities have passed, or are passing, through much the same stages of development. In speaking of the Los Angeles situation, Assistant Superintendent Gould says :

When the intermediate schools were first organized in the elementary plants, no special additional salary for the teachers was proposed. However, six months later a special salary was given intermediate teachers which rated them between elementary and high-

¹ *Op. cit.*, pp. 383-384.

² *Op. cit.*, p. 115.

school teachers. Finally, in September, 1913, they were placed upon the same basis as far as salary and educational qualifications are concerned.¹

What has been said of California cities is true of many leading junior high school cities throughout the country, with possibly more exceptions along the Atlantic coast than elsewhere. The point of view of the school authorities in these cities is brought out in an interesting manner in a recent statement by Assistant Superintendent Gule of Columbus, Ohio. She says:

Teachers for the intermediate schools should be the best in every way. First of all, they should be the best in personality, in understanding, and in sympathy with young folks. They should know so much of their subjects that they can make big truths simple enough for children. They must have the widest training and broadest outlook possible. They must be able to see big things big and small things small. They must be able to realize that it is more important that a boy develop the feeling of achievement and the habit of succeeding than to memorize the incidents of Washington's administration or a Shakespearean sonnet which he cannot comprehend.

Other things being equal, the college graduate is more likely to have a broader outlook and better understanding of people than one without such training. Therefore, in Columbus all teachers classified as intermediate must be graduates or have the equivalent preparation in their special branches. Since they have the same qualifications, they are on the same salary schedule as the high-school teachers. They are mostly teachers of experience in senior high or elementary schools or both. The junior high school should in no sense be a training school for the senior high school.²

Salary. What has been said of the training of junior high school teachers is in a measure also true of their salary. At the outset the salaries of the teachers in the

¹ *School Review*, Vol. XXVIII, p. 420.

² *N. E. A. Addresses and Proceedings*, 1920, p. 220.

seventh and eighth grades were much the same as those of elementary teachers in corresponding grades. The salaries of ninth-grade teachers were more often on a par with those for regular high school teachers. To the extent that junior high school teachers were selected on the basis of exceptional qualifications and long experience, the general salary level was from the very beginning in many cases somewhat above the average.

With the gradual rise in the requirements for training, extending in many cases, as indicated above, to the high school level, there has come a gradual rise in salary. Indeed, the two have kept a very close pace, as shown by the fact that those cities which require the same qualifications for junior and senior high school teachers also pay the same salaries.

Beyond this, little need be said regarding the actual status of these salaries. They are of course, along with teachers' salaries generally, entirely too meager. And yet it is interesting to note that some cities are beginning to offer salaries with a measure of promise. In a recent report on salary schedules for the school year 1921-1922, Miss Bertha Hebb of the Bureau of Education enumerates a series of sixty-three cities which "offer the highest maximum salaries to their junior high school teachers of any cities having a population of ten thousand and over." In discussing this schedule, she says :

The maximum salaries range from \$2,000 per annum to \$3,300, the highest being offered by the city of Cleveland Heights, Ohio. The next highest are those of Gary, Indiana, and New York, New York, namely, \$3,250 each; and next, Cleveland and Youngstown, Ohio, \$3,000 each. The length of time required to reach the maximum for the cities under consideration is from five to six years, but the most frequent custom in this regard is promotion to the maximum salary the eighth or tenth year.¹

¹ *School Board Journal*, Vol. LXIV, p. 58.

THE JUNIOR HIGH SCHOOL

Certification. At the outset the teachers for the seventh and eighth grades of the junior high school held most commonly elementary certificates. Those for the ninth grade were more often certificated on the same basis as high-school teachers. For a time it was generally assumed that a special junior high school certificate would be evolved as the new institution took definite form, and for some years the trend was doubtless in this direction. However, recent developments, tending, as they do, strongly toward common requirements for junior and senior high school teachers, do not augur well for such a certificate, even though it has actually come into being in some states. Developments in California are probably rather prophetic in this respect. Several years ago provision was made for a junior high school credential, ranking between the general elementary and the general secondary credentials. In actual practice, however, this credential is recognized only in the smaller communities. The larger cities which have made the most significant progress in the development of junior high schools require, and will continue to require, regular secondary certification. This does not imply, however, that these cities do not want teachers specifically prepared for junior high school service.

The following extract from the report of the recent Committee on the Training of Junior High School Teachers submitted at the meeting of the Association of Supervisors of Student-Teaching at Cleveland, Ohio, affords an excellent summary regarding present practices in certificating junior high school teachers throughout the country :

The committee deemed it necessary to inquire into the state regulations for the certification of junior high school teachers. Data were obtained from practically all the states.

The following states mention a special certificate for junior high school teachers or give a certificate which is valid for junior high school teaching including grade 9, but not for the entire senior high school work: California, Indiana, South Dakota, Kansas, Oregon, Virginia, New Hampshire, Texas, Utah, West Virginia, Wyoming.

Practically all the other states give no certificate valid for junior high school work (including grade 9) except the one valid for all secondary-school work, from grade 12 down. In practically all cases the same certificate is valid for all grades from 1 to 12.

In most cases such a certificate can be secured upon the completion of a two-year course in college or normal. The exceptions are: Georgia, Texas, Utah, require three years' study, with Texas and Utah requiring this for their special junior high certificates and Georgia requiring it for any high-school certificate of any grade, junior or senior.¹

Idaho, Montana, Washington, Arizona, New York, Minnesota, Colorado, Illinois, Ohio, Connecticut, specify a four-year course of college grade as requirement for certificate to teach in high school as given upon basis of study, without examination for certificate. It is conceivable that some of those may permit normal-school graduates on a two-year course to teach in junior high schools, especially grades 7 and 8.

California and Ohio seem to be the only ones specifying the inclusion of student-teaching as a basis for junior (or senior) high school certification, though many recognize it. The greater part of the states specify some special professional study as part of the course leading to certification; though the statements of such are so chaotic and indefinite that a tabulation of them is out of the question; at least from any data we have been able to secure from them.

It would seem, in view of these facts, that certification requirements at present need have very little to do with schemes for training junior high school teachers. Almost any reasonable program would meet requirements in any state, with the possible exception of California and Ohio, where student-teaching is required.²

¹ California now requires the equivalent of four years of college work for the junior high school certificate.

² *Educational Administration and Supervision*, Vol. IX, pp. 260-261.

The problem. After stressing the crucial character of the teaching staff in junior high school organization and administration, and reviewing briefly its present status from the standpoints of sex, experience, training, salary, and certification, it is quite obvious that the problem which lies ahead is largely the problem of training and retraining for our junior high schools a staff of teachers which is not only, from the standpoint of training, on a par with the senior high school staff, but which is in addition rather specifically prepared for junior high school service.

It is scarcely necessary to adduce further arguments in favor of the thesis that junior high school teachers should be essentially on a par with senior high school teachers from the standpoint of training. It is quite obvious that only a well trained teacher can function effectively with reference to the major purposes of the junior high school. Exploration and guidance, which make such heavy demands upon the junior high school teacher, are in the very nature of the case quite out of the question without a thorough-going grasp of subject-matter, a keen understanding of children, and a good command of educational practices. In addition the junior high school teacher needs a large fund of general knowledge extending far beyond his own special field. Finally, he should have some first-hand knowledge of the great world of human endeavor, the things that people are doing, the motives that actuate, and the reasons that guide. Book knowledge, never very effective alone, is especially inadequate at this stage. Obviously a teacher who would meet these requirements must be well trained and reasonably mature.

That junior high school teachers need special preparation for the service which they are to render also needs but little

argument. Although the junior and the senior high schools represent one continuous process, their major purposes are, nevertheless, quite distinct when considered by themselves. This necessitates at least a certain amount of differentiation in teachers' training curricula. Just how much, remains to be determined. Other things being equal, the academic content of the curricula may well be much the same. The chief differentiation will, therefore, probably come in connection with the professional content of the curricula, especially in connection with the teachers' courses for the several academic and vocational subjects, the practice-teaching, and the specific courses on secondary education.

As a matter of fact, wherever it is possible to devote two semesters to the study of secondary education, the first semester's work, concerning itself chiefly with adolescence and the general principles of secondary education, might well be identical for the two curricula; the second semester's work, however, should be rather sharply differentiated, one course dealing specifically with the junior high school and the other with the senior high school.

Beyond this, the professional content of the two curricula should doubtless differ somewhat in recognition of the fact that the junior high school receives its pupils directly from the elementary school and the senior high school sends a certain proportion of its graduates to higher institutions. It is highly probable that the junior high school teachers' training curriculum should include at least one thorough-going course in elementary education and that there should be some course or other in the senior high school teachers' training curriculum giving a general view of the field of higher education.

The whole problem of training teachers for specific levels

of service, such as the elementary, the junior high, and the senior high school levels, is of course greatly complicated by a variety of factors. In the first place, many individuals find the level of service for which they are best adapted by nature only after several years of practical experience. In time we shall doubtless succeed in shortening this try-out period in a measure through such agencies as psychological tests and rather widely distributed practice-teaching. The situation is, however, further complicated by the fact that an individual who is really wide-awake is almost sure to experience marked changes in point of view and interest during the age interval from twenty to thirty. Consequently, there is a disposition on the part of teachers to pass from one level to another, especially from the lower to the higher. This would be much more marked were it not for the fact that many leave the profession during this interval. Finally, the situation is complicated by economic considerations in as much as the salaries for the several levels of service vary considerably in practice. It is only natural that the more ambitious who by dint of circumstances find it necessary to begin at the bottom should strive for higher levels of service.

We may then, until we have effected rather fundamental readjustments in our scheme of things, expect a rather large amount of shifting from one level of service to another. And, since some of the factors at least are in part probably beyond our control, we may as well accept a certain amount of this shifting as inevitable. Among the readjustments now under way the most significant is that which seeks to place junior and senior high school teachers on the same level from the standpoint of quantitative requirements for training and with regard to salary. This will do much

to secure for our junior high schools a reasonably stable teaching staff. Without such a readjustment we should experience difficulty not only in holding the teachers who enter the service but also in securing an adequate supply of well trained recruits. Foster, in a recent article, characterizes the situation as follows :

Moreover, certain other factors tend to keep down the number of such students. As it is, students do not care to go into junior high school work permanently; partly because of the lower salary, and partly because of a tendency of "regular" high-school teachers to regard such work as inferior. However, it should be added that the lower salary is not universal, especially in the larger cities, and that the discrimination in favor of senior high school work is decreasing as the requirements for the two types tend to become equal. Many states, however, certificate for the junior high school work on the basis of a three-year college course, especially in the West; and this leads to lower salaries and professional standing with the result that students prefer to complete the four-year course and thereby qualify to enter the senior high school field ultimately if not immediately. Until the salary and professional standing of the junior high school teacher are on a par with those of the senior high school teacher, there will continue to be a shortage of properly trained teachers for the work, and the bulk of the supply will come from these reconstructed grade teachers. As it is, one main reason why these latter are more sought after by superintendents is that they are more likely to enter the work whole-heartedly, and therefore to be efficient and more permanent. At the same time, we should not overlook the fact that many students will first teach in junior high school positions as stepping-stones to subsequent senior high school work; and indeed several superintendents have urged that the senior high school teacher have her student-teaching in the junior high school work.¹

But the problem of securing an efficient junior high school teaching staff is only partly solved when we have provided adequate facilities for the training of teachers for this level

¹ *Educational Administration and Supervision*, Vol. VIII, pp. 352-353.

of service and when we have placed the junior high school staff as such essentially on the same salary level as the senior high school staff. This will do much to insure an adequate supply of well trained recruits from time to time, and it will go far toward keeping teachers who are peculiarly adapted for junior high school service from passing to the senior high school, but it will not keep teachers from leaving the profession.

It is a well-known fact that our teaching profession, outside of colleges and universities, is far more transient than that of any other of the leading countries. The average American teacher teaches only a few years. The men leave as a rule to enter more remunerative occupations and the women leave most commonly upon getting married. In this way we continually lose a large proportion of our best teachers just when they are becoming most proficient. While this loss has a very serious effect upon the efficiency of our schools all along the line, it is especially detrimental at the junior high school level, where maturity, balance of judgment, sympathy, and breadth of outlook are so indispensable. The fact of the matter is, and we may as well recognize it frankly, that we shall not be able to solve in an adequate manner the problem of the junior high school staff, nor the problems of the teaching staffs for other levels of service, until we begin to retain permanently those teachers who are really adapted to teaching. This is the task that lies ahead.

The causes which are inducing teachers to leave the profession in such numbers are not far to seek. The two outstanding ones are inadequate salaries and the traditional opposition to married women teachers. The first of these is more serious than the second. It not only deprives our

staffs of an adequate proportion of men, but it renders teaching uninviting to married women, should they be allowed to teach, as they are in some of the leading cities.

Accordingly, if we are to develop a real teaching profession in this country, salaries must be raised. On the whole we are doubtless tending in this direction, though more slowly than we should. Similarly, the opposition to married women as teachers must be cleared away. Not nearly all women teachers would of course continue to teach after marriage. There would be considerable selection. Other things being equal, those who have the greatest interest in the profession and are most adapted to the work of teaching would continue, all of which would of course militate strongly in favor of an efficient teaching staff. As a matter of fact, those communities which have made the greatest progress toward the development and retention of high-grade teaching staffs have long since removed the ban against married women. And there is a growing disposition in other communities to do likewise.

As repeatedly stressed, the junior high school level is peculiarly in need of mature and well balanced teachers. Providing adequate salaries and admitting married women freely will do much to insure such teachers for junior high schools.

THE ADMINISTRATIVE AND SUPERVISORY STAFF

The administrative and supervisory staff of our secondary schools is still so much in the making that it is difficult to characterize it with any degree of accuracy. Less than a decade ago it consisted, even in the case of the larger high schools, at best of little more than a principal, a nominal vice-principal, and a group of more or less nominal heads of

departments. Today a school with an enrollment of from fifteen to eighteen hundred pupils is likely to count among its administrative and supervisory staff a principal, two full-time assistant principals — one a woman specifically in charge of girls' affairs, and the other a man specifically in charge of boys' affairs — a group of real heads of departments in charge of important departmental supervisory functions, a student adviser in charge of extra-curricular activities, a librarian, a vocational counsellor, a recorder, and two directors of physical education — one for girls and the other for boys. And the staff is still growing, and must necessarily continue to grow in proportion as the secondary school becomes thoroughly conscious of its real functions. Nor is the staff increasing in numbers only; on the contrary, the most striking changes have been changes in function.

We shall discuss the first three of these — the principal, the assistant principals, and the heads of departments — at some length. The rest are referred to directly or indirectly in other connections.

The principal. The principal is of course the oldest and the most important member of the administrative and supervisory staff of a secondary school. In spite of this the office of the principal is a comparatively recent one, and one which is still in the making. It has come rather gradually during the third stage of American secondary education. The Latin grammar schools and the academies were for the most part small institutions, and those in charge were little more than head masters or head teachers. With the coming of the public high school, however, conditions arose which made increasing demands upon the head teacher — so much so, indeed, that he was more and more compelled

to turn from teaching to administrative affairs. Thus the office of principal came by degrees.

The standardization of the high school and its articulation with the state university, beginning with the last quarter of the nineteenth century, did much to enhance the dignity and the importance of the office of the principal. The same thing is true of the phenomenal growth and expansion which the high school has undergone in the course of the last three decades, a growth and expansion which have gone far toward making the secondary school the school of the adolescent children of all the people. The movement for the reorganization of the school system, which has given us the junior high school and the junior college, has also done much to magnify the office of the secondary-school principal, because of the vastly increased demands for constructive leadership which have come along with it. Finally, the scientific movement in education — a movement which, although still in its infancy, has, nevertheless, already almost completely revolutionized practices in educational administration and supervision — has come to make new and hitherto undreamed-of demands upon the secondary-school principal, and in so doing is bestowing upon his office a dignity and a significance heretofore quite unknown.

Present status of the principalship. While the office of the secondary-school principal has been steadily growing in dignity and importance, it is still in many respects very much in the making. Nevertheless, there is much in the present status of the principalship which is distinctly encouraging and which augurs well for the future. The results of two recent investigations are of special interest at this point since they throw considerable light upon some of the more important aspects of the principalship as it

actually is. The first of these concerns itself primarily with the status of the principal from the standpoint of such criteria as preparation, experience, motives for entering the work, probable period of service, and attitude toward the work. The second centers about the functions of the principal.

Hinton's findings. The first investigation was undertaken by Hinton during the spring of 1922. A questionnaire was addressed to a "rather carefully selected group of representative high-school principals in the states of the Middle West." The salaries of these principals ranged from \$675 to \$7,500 per annum; their ages from twenty-two to sixty-one years; and their professional experience from one to forty-four years. While many were manifestly poorly prepared for their work, a considerable proportion held the master's degree in education. Most of them had had from one to six years of experience as high-school teachers before they became principals.

The motives which induced these individuals to enter the profession are of particular interest since they show quite unmistakably that the high-school principalship does not yet make as strong an appeal to the ambitious young man as do a variety of other careers. He regards the principalship at the outset very often primarily as a stepping-stone to something more promising. Hinton says:

The most common motive is some temporary reason, such as the ability to realize a larger initial salary than is possible in other lines of work for which one is qualified. One primary purpose is to earn money to continue one's schooling or to pay off a debt before undertaking some other field of work. However, it is significant to note that a very large percentage of the men who enter the profession for this reason find their work so attractive that they eventually decide to remain in it. They find that they have developed a natural liking

for and a keen interest in young people and are attracted by the opportunity to render effective social-civic service.¹

Especially significant is the finding, already partly brought out above, that the high-school principalship, once an individual has had an opportunity to try it out, makes a deep appeal, and tends to hold permanently many of those who regard it at first merely as a stepping-stone to something better. Hinton says further :

There are very few professionally alert principals who do not plan to continue in the profession for the rest of their natural lives. Their work is, indeed, a life work and not merely a job to hold until something better turns up. Of the hundred representative principals who were questioned regarding their professional future, but a very small percentage stated that they planned to transfer to some other line of work. Most of those who looked forward to a change hoped to go into a superintendency or to enter the field of college teaching. They gave as the main reason the opinion that the transfer would put them in a position to render greater professional service and at the same time permit them to realize a larger income.

The typical principal finds school work so attractive that, in spite of any disadvantages which it may offer, he plans to make it his life work.²

Findings of the North Central Association of Colleges and Secondary Schools. The second investigation was carried on by the Commission on Secondary Schools of the North Central Association of Colleges and Secondary Schools, under the immediate direction of Professor C. O. Davis, and concerned itself primarily with the functions of high-school principals. The purpose of the investigation was "to learn as nearly as possible just how principals in general conceive of their positions and how they actually

¹ *School Review*, Vol. XXXI, p. 30.

² *Op. cit.*, pp. 30-31.

administer their offices." The information was obtained through a questionnaire which was addressed to all schools seeking accredited relations with the association during the school year 1920-1921. The final report was based upon replies from 1,350 public high schools. Of these, 436, or 32.3 per cent, were classified as large schools, having an enrollment in excess of 350; 610, or 45.2 per cent, were classified as medium-sized schools, having an enrollment between 150 and 351; and 304, or 22.5 per cent, were classified as small schools, having an enrollment of less than 151. We shall touch upon only a few of the most pertinent findings of this investigation.

The first of these concerns the manner in which the typical high-school principal spends his time. In summarizing the findings bearing upon this point, Davis says:

In a typical average day the typical principal spends his time approximately as follows: 40 minutes inspecting the building; 40 to 60 minutes supervising instruction; 90 minutes teaching classes; 40 minutes taking charge of session-rooms; 60 minutes carrying on routine office work; 30 minutes holding conferences with teachers; 30 minutes holding interviews with pupils; 30 minutes interviewing callers; 30 minutes attending student collateral activities; 30 minutes attending civic and out-of-school professional matters. This gives a total working day of about 440 minutes or 7½ hours and, superficially examined, the uses made of it appear not seriously questionable.¹

Other findings throw interesting light upon the administrative and professional functions of the principal. In other words, they indicate what powers the principal has and how he uses them. Davis summarizes the findings which bear on this aspect of the situation as follows:

¹ *School Review*, Vol. XXIX, p. 344.

In the exercise of professional powers, 42.8 per cent exercise no right to interview candidates for teaching positions; about half, 53.9 per cent, have the right to recommend new teachers; and approximately the same number, 52.5 per cent, have some authority in respect to substitute teachers. A slightly larger number, 62.1 per cent, have any voice in respect to salaries. On the other hand, 65.2 per cent are expected to take the initiative in suspending and dismissing teachers from service.

In making courses of study, recommending textbooks, making syllabi of instruction, and determining prescriptions for graduation, approximately 75 per cent of the principals seem to be given a rather free hand; but in formulating and recommending a building budget, only 25.9 per cent are given any power whatever; in recommending building policies and programs, only 41.2 per cent are consulted; while in selecting school equipment, 75.7 per cent have their views honored.

Only 48.8 per cent are accustomed to attend meetings of the board of education even though matters pertaining to the high school are to be considered, and only 70.4 per cent have the power to arrange commencement exercises and to preside at them.

On the other hand, 91.3 per cent are given supervisory control of student activities and 84.8 per cent have control of student funds. Again, while 88.3 per cent are given nominal power to determine the general organization and administration of their own school, and 95.2 per cent are permitted to call separate high-school teachers' meetings, only 63.2 per cent have control and direction of the janitorial staff within their school, and only 70.2 per cent can nominate their own assistant administrator.

In the managerial duties, nearly 95 per cent of the principals report that they outline their school policies to their assistants and teachers from time to time, solicit their criticism and suggestions, and seek to organize their staffs into effective agencies of administration. About 5 per cent deny that they employ any such practices, and seemingly are as autocratic as medieval monarchs. But even among the majority, large numbers refuse to delegate duties or are unable to do so. Only 45.8 per cent of them turn over even minor matters to paid clerks, and 35.2 per cent refuse to relinquish to responsible assistants even the details of what they conceive to be large matters.

Nearly 96.6 per cent at least seek to keep their hands on the pulse of the school by arranging and conducting the stated auditorium or assembly exercises.¹

The findings also throw light upon the extent to which the principal engages in the supervision of instruction and the steps which he takes toward this end. Davis says :

The typical principal pays a visit to each classroom once in two weeks and stays from fifteen to twenty minutes ; he comments orally to the teachers on the work observed ; offers constructive criticisms ; supplements his visits with personal conferences ; invites to seek advice from superiors ; and holds frequent teachers' meetings designed to consider and improve methods of teaching. To do this requires from one tenth to one fifth of all the available time. About three fourths of the principals, likewise, make a practice of encouraging teachers to visit other teachers in their own building or in other systems, bring pressure to bear upon teachers to attend college or university summer sessions at least once in five years, and calculate increases in salaries partly upon continued effort at self-improvement.

On the other hand, only a variable minority of principals ever give demonstration lessons with classes at the time of their visits, conduct reading circle or study clubs of high-school teachers, hold teachers' institutes oftener than once per year, or have any form of promotional examination for teachers. Only about half the principals ever participate at all in the class work witnessed during their supervision, or ask questions of pupils or teachers.²

Beyond this, the findings afford some information regarding the extent to which principals are utilizing recent scientific agencies as aids in administration, supervision, and instruction. Davis characterizes the situation as follows :

In the newer fields of appraising, recording, and experimenting, less than one third of the principals make use of rating scales to meas-

¹ *Op. cit.*, pp. 345-346.

² *Ibid.*

ure the accomplishments of teachers and pupils. This of course is not surprising. That the majority of them are interested in the new scientific movement is evidenced by the fact that 87.6 per cent profess to be lending their support at present to the movement centering in scientific studies and experiments, while 42.9 per cent are actually carrying on in their schools studies and experiments of this kind.

Few schools have as yet a bureau of statistical measurements, and fewer still have an educational or psychological clinic. Moreover, while 63.1 per cent make a practice of analyzing the data relating to the promotion, failure, and elimination of pupils and of formulating an age-grade report each year, only 35.1 per cent have any well organized plan of educational and vocational guidance; only 29.7 per cent have placement bureaus; and only 31.0 per cent have any plan of follow-up analyses and help. Only 45.5 per cent likewise make any study of the cost of instruction by subjects.¹

Finally, the findings afford a glimpse of the personal and relational duties and privileges of the principal. It was found, for instance, that the border-line duties of superintendents and principals are rather clearly defined in 54.2 per cent of the schools; that superintendents and principals hold frequent consultations to formulate policies relating to high schools in 86.2 per cent of the school systems; that there are stated conferences between principals and heads of departments in 58 per cent of the schools; that there appear to be in operation well defined plans of coöperation between the office of the principal and auxiliary civic agencies in 68.2 per cent of the schools; that 80 per cent of the principals are working in harmony with local social organizations and are making systematic use of the newspapers in order to give publicity to school policies and school needs; that 38.2 per cent of the principals make a practice of writing articles of an educational character for publica-

¹ *Op. cit.*, pp. 346-347.

tion; and that 85.1 per cent of them make it a practice to address their fellow-citizens on educational topics when invited to do so.

The major functions of the secondary-school principal. On the strength of the findings brought out through the investigation referred to above and a careful analysis of the problems of the secondary school, Davis concludes that the outstanding functions of the secondary-school principal are approximately as follows:

1. To formulate a vision and a policy for the school over which he presides and to communicate this vision to his entire staff of assistants.
2. To lead in the formulation of ways and means for realizing their vision and policy.
3. To supervise instruction, inspire teachers and pupils, coördinate and articulate efforts, and secure unity of spirit and practice.
4. To serve as the school's accredited agent before the public and to enlighten and advise the public in respect to what the schools are undertaking, what they are achieving, what are their needs, and what education truly signifies.
5. To share confidences with his teachers and pupils, capitalize their intelligence and enthusiasm, delegate to them as large and as many responsibilities as circumstances permit, and integrate and unify the work of the entire school.¹

This statement, along with others which have appeared recently, stresses three major functions of the secondary-school principalship — namely, leadership, administration, and supervision. We shall accordingly discuss the secondary-school principal (1) as a leader in the school and the community, (2) as an organizer and administrator, and (3) as a supervisor.

The secondary-school principal as a leader. It should be clearly understood that the type of leadership which is

¹ *Op. cit.*, p. 350.

demand of the secondary-school principal is educational leadership in the community, within the staff, and among the pupils.

It is the function of the principal to communicate and to interpret to the community, through such agencies as parent-teacher clubs, newspapers, and social and civic organizations, the aims and purposes of the public secondary school; to lead in the alignment of interests with special reference to the welfare of the school as a great social and civic enterprise; to direct campaigns whenever these concern issues of major importance to the school; and to foster community sentiment in keeping with the best interests of the school. Beyond this, it is scarcely necessary or desirable that the principal should bear upon his shoulders the burden of general leadership for the whole community. He should be a private citizen, secure and free in the exercise and enjoyment of the rights, duties, and privileges of such citizenship.

It is the function of the secondary-school principal, moreover, to act as the professional leader of his staff of assistants and teachers. He must aid them in the interpretation of community needs and lead them to comprehend the peculiar problems of the particular school in order that each may see his task in the light of the whole. In other words, as Davis points out, he must "formulate" or, better still, lead in the formulation of "a vision and a policy for the whole school over which he presides" and communicate these to the entire staff, and then "lead in the formulation of ways and means for realizing their vision and policy." Beyond this, he should assist the staff in every possible way in keeping abreast of the times in professional matters. This means of course that he himself will be the best informed

member of the staff and that he will do everything within his power to place at the command of the staff such facilities as are essential for professional growth and alertness, including among other things a good professional library, meetings of a highly professional order, and opportunities for experimentation and for interclass and interschool visitation. Finally, the really able leader will make no pretense of knowing everything. He will recognize quite frankly that the members of his staff have specialized along various lines and that they know more about many matters than he does. Nor will he make any attempt to lord it over the members of the staff; on the contrary, he will elicit from them, in a large measure indirectly through his attitude and example, the highest degree of coöperation.

Finally, it is obviously the function of the secondary-school principal to be a leader among the pupils of the school. To the pupils, as to the community and the staff, he must interpret, in terms of their own understanding, the purposes and the functions of the school. He must strive constantly to develop a point of view, a sentiment, and a morale in keeping with the best interests of the school; for, as Bagley has well put it, the well disciplined school is the school where good behavior has become fashionable. Here again the wise leader will of course make no attempt to be spectacular or domineering. On the contrary, he will keep as far as possible in the background and will do his work indirectly; nevertheless, he will be the guiding spirit.

The secondary-school principal as an organizer and administrator. The actual and potential duties of the secondary-school principal as an organizer and administrator are many and varied — so much so, indeed, that he must be

highly discriminating in the face of the multitude of tasks which confront him. It is of the utmost importance, in other words, that he analyze the total situation and make a careful distinction between the factors which demand his personal attention, those which may be delegated to members of the staff or to the staff as a whole, and those which may be performed by clerical assistants.

Superintendent Fillers of Corsicana, Texas, in a recent article submits such an analysis and distribution of the administrative duties of the office of the principal. This is so suggestive that we shall quote it in part. He draws first of all a clear-cut distinction between curricular and extra-curricular functions, the former embracing "all those functions that have to do with the management of a school in so far as the problems of classification, instruction, and discipline are concerned," and the latter "those modern adjuncts of a school called student activities." The functions are then in each case classified under three heads—namely, clerical, general in control, and inspectorial and coördinating. The curricular list of duties will suffice for purposes of illustration. It is as follows:

I. Clerical

1. Keeping a record of school and of class attendance
2. Keeping a record of tardiness
3. Handing out readmission slips
4. Making reports to parents of absences, tardiness, and pupils' work
5. Making statistical reports to the superintendent
6. Summarizing reports of teachers
7. Keeping accurately a permanent record of pupils' credits
8. Making requisitions for supplies
9. Reporting repairs needed
10. Caring for free textbooks and other equipment or supplies

11. Keeping a record of books or material loaned to pupils and teachers
12. Collecting tuition and other fees and sending to proper officer
13. Making and reporting pupil transfers
14. Distributing books and supplies through coopération of teachers
15. Answering telephone calls
16. Keeping a record of the teachers (This will include their absences)
17. Recording names of substitute teachers and exact dates taught
18. Making out college-entrance certificates
19. Tabulating tentative program cards of pupils

II. General in control

1. Interpreting the tabulation of tentative program cards
2. Classifying pupils
3. Holding group and individual conferences with pupils for the purpose of explaining schedule, course of study, and requirements
4. Scheduling each pupil's work
5. Arranging a daily schedule for the school
6. Checking daily schedule against the time-distribution of individual pupils and teachers
7. Holding teacher conferences for the purpose of improving schedule and explaining the control of the school
8. Working out plans for handling problem cases in attendance, tardiness, instruction, and discipline
9. Coöperating with teachers in setting up standards in the school in discipline, instruction, and social life for the pupils
10. Working out effective plans for keeping the attendance and permanent records of the pupils
11. Arranging for class, hall, and yard control
12. Inspecting and directing the work of the janitors
13. Working out a plan for controlling the use of school telephones

14. Conferring with the superintendent regarding ideals and larger objectives of the school
15. Holding conferences with parents
16. Laying, with the advice and counsel of officers and teachers, plans for the constructive growth of the school
17. Outlining plans for revising the course of study and setting the teachers to work on the problem

III. Inspectorial and coördinating

1. Inspecting the character of pupil accounting
2. Handling personally the problem cases arising therein
3. Checking the keeping of records and reports
4. Advising teachers on points that will improve classroom and study-hall discipline
5. Coördinating the marking done by the different teachers
6. Coördinating in related departments of the school
7. Checking up the outcome in the problem cases assigned to teachers
8. Checking the clerical work in general control delegated to others
9. Developing right attitudes toward the school and its objectives in the minds of teachers and pupils¹

The table on the following page shows the distribution of these functions, as suggested by Superintendent Fillers, the numbers referring to the items of the list as quoted above.

That such an analysis of the total situation and the consequent delegation of powers is one of the most important administrative functions of the modern secondary-school principal is being increasingly recognized. Briggs, in a recent article on the professionally trained high-school principal, puts the matter in part as follows:

An executive is successful not for what he does but for what he gets others to do. The principal of a high school should study to

¹ *School Review*, Vol. XXXI, pp. 49-50.

DISTRIBUTION OF CURRICULAR DUTIES¹

DELEGATED TO CLERK	DELEGATED TO TEACHERS	PERFORMED PERSONALLY
I: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19.	I: 14. II: 2 (in part), 8, 9, 11, 12, 15, 16, 17. (The working out of details under these headings should be dele- gated.) III: 5, 6, 9. (At least a part of this should be done by the teachers.)	II: 1, problem cases in 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 (in part), 16, 17. III: 1, 2, 3, 4, 5 (in part), 6 (in part), 7, 8, 9 (in part).

ascertain the peculiar activities in which each teacher is strong and focus his attention on these until they have attained their maximum growth. Thus he not only secures the greatest possible positive contribution to the work of the school but also goes far toward developing an *esprit de corps*.

The principal should also, after ascertaining the individual faculties of his staff, delegate to each one some responsibility, large or small, for which he is peculiarly competent. This sentence means precisely what it says: The principal should delegate not only the duty but also the responsibility. It is the teacher's opportunity to exercise initiative, to organize, to fail or succeed. Whatever happens, the teacher grows and, because of the experience, is ready for some larger task. After this delegation the principal should stimulate, advise, and encourage; and when success is accomplished, recognize it and give public credit to the one deserving it. Many administrators are jealous of the successful accomplishment of their subordinates and shortsightedly attempt to withhold credit or to secure it for themselves. Even such selfish injustice should recognize that in the long run the public thinks of the school as a whole and of the principal as the one ultimately responsible for what is good or what is bad. Really successful administration is found when each individual

¹ *Op. cit.*, p. 52.

in the corps is enthusiastically doing the tasks that he is able to do well. . . .

The duties of administration are definite, concrete, and imperious. Because of this it is easy for a principal to fall into the habit of giving them first attention and even of making them a fetish. But the professional principal soon recognizes that a school is administered only that it may be instructed, that his systems and his routines have no value unless they decrease the friction and facilitate the work of the teachers. The professionally minded principal also recognizes that most of the administrative duties, which others jealously reserve for themselves, can be quite as well or better performed by a clerk or by delegated teachers, and he perfects his organization so as to free himself for more important responsibilities. The sure sign of inefficiency is a high-school principal continuously busied with routine details.¹

The secondary-school principal as a supervisor. That it is one of the most important functions of the secondary-school principal to improve the quality of instruction in his school is being recognized increasingly. There is a growing conviction, moreover, that principals have thus far fallen lamentably short in this respect. Briggs, in the article referred to above, characterizes the situation as follows :

The last of the major duties of the professional principal concerns the improvement of the subject-matter taught and the teaching. In these matters, whatever else it may have or lack, a school achieves its modicum of success. One would suppose, therefore, that all principals give the major part of their time, attention, and effort to the improvement of instruction. But this is far from true. In fact, it is unusual to find principals who give the matter, either directly or indirectly, any considerable amount of attention. By their own statements, which probably do not err in being undergenerous, one period a day or less is given to supervision of instruction by 52 per cent of the principals of the first class high schools in West Virginia,

¹ *School Review*, Vol. XXX, pp. 657-658.

by 65 per cent in Kentucky, by 75 per cent in Virginia, and by 89 per cent in Missouri (St. Louis and Kansas City being excepted).

The reasons for the neglect of this most important field are several. The one most commonly given is lack of time. But that is not the real reason. As previously stated, a professionally trained principal learns how to organize his school, to delegate duties, and to present to the board of education a convincing program likely to secure time necessary for what he believes to be essential. Even when average principals have time at their disposal, they do not ordinarily spend it in the supervision of instruction. In one large city high school there are two assistant principals and five clerks. Set forth neatly in an organization book are the duties of each one — corridor patrol, control of the keys, lunchroom finance, signing excuse blanks, and the like, but not one item pertaining to the improvement of the subject-matter or of instruction. This situation is extreme and exceptional in that the principal has adequate assistance; it is not untypical in that he has organized the school so as to care for the easy, concrete, objective details and neglected the difficult and more or less intangible matters for which the school exists.

The real reason for the neglect of attention to the improvement of instruction is that many principals tacitly recognize their incompetence to perform the duties satisfactorily. Inasmuch as most high-school teachers have some training and all but a few are experienced, no superficial inspection can be satisfactory; no arbitrary criticisms and dogmatic directions can long pass for success. Poor teachers may be made good and good teachers made better by regular supervision, even though it consists only of suggestions of helpful detail and keeps each teacher consistently doing his best to secure the approbation of the superior; but the demand, the insistent need, is for a leader who will work out with the staff in teachers' meetings, in committees, and in personal conferences clearly stated and convincing statements of purpose, for each subject as well as for the school as a whole, and then follow, day in and day out, with observations, learning, suggestion, encouragement, and recognition. This is the sort of supervision that is needed, the sort that is not likely to be given unless the principal is professionally trained for this work.¹

¹ *Op. cit.*, pp. 659-660.

The junior high school principalship. We have discussed the secondary-school principalship at some length and without specific reference to the junior high school. The fact of the matter is that the principalships of the several types of secondary schools — the traditional four-year high school, the senior high school, and the junior high school — have much in common. The outstanding functions and problems of the principals are much the same in each case. The traditional four-year high school constitutes of course in a very large measure the background of the junior and the senior high schools. The principalships of the latter represent at base an outgrowth and differentiation of the principalship of the former. This being the case, it would be rather futile to attempt to discuss the latter except in the light of the former. Each of the new principalships has of course its specific problems, as has each of the new schools, but these are first of all the problems of the secondary school, and only secondarily those of the junior or the senior high school. What we have said regarding the secondary-school principalship has, therefore, a very definite bearing on the principalship of the junior high school.

At present the status of the junior high school principal is of course quite as variable as is the status of the junior high school teacher. As in the case of the teachers, the principals were at the outset not infrequently selected from the ranks of able and experienced elementary-school principals. The salary ranged usually somewhere between those paid to elementary principals on the one hand and to high-school principals on the other. From the standpoint of experience and professional training, the junior high school principal was not infrequently the superior of the high-school principal; from the standpoint of personality and

natural ability, he was most often his equal ; and from the standpoint of academic training, he was as a rule his inferior. This choice was for the time being on the whole a very fortunate one. During the early formative stages the new institution was in need of an experienced and professionally trained leadership rather than a leadership excelling in academic scholarship.

The time has passed, however, when the junior high school principal can afford to be the inferior of the senior high school principal in academic scholarship. Similarly, the time has passed when the senior high school principal can afford to be the inferior of the junior high principal from the standpoint of professional training. In each case natural ability, teaching experience, professional training, and academic scholarship are becoming increasingly indispensable.

The many delicate problems arising in connection with the organization of courses of study and curricula alone make it quite indispensable that the junior high school principal should possess a high degree of academic scholarship. The fact that the junior high school has thus far made its greatest progress along administrative rather than curricular lines is in no small part due to the fact that its leadership was better prepared to direct the former than the latter. While this may have been well enough at first, the time has come when curricular problems can no longer be relegated to second place. The outstanding problem before the junior high school today is the problem of reorganizing the courses of study and the curricula in keeping with the needs and interests of children twelve to sixteen years of age, and this demands academic as well as professional training.

As indicated earlier, the trend is doubtless in the case of the principal, as in the case of the teachers, toward common quantitative educational requirements for junior and senior high school service. And common educational requirements presage obviously a common rank and common salaries. The professional training of junior and senior high school principals will have much in common. It will differ to the extent that each requires special knowledge and special skill to direct his institution to function effectively with reference to the purposes which are peculiarly its own. This means of course that the former will specialize in junior high school organization and administration and the latter in senior high school organization and administration. Each requires a thorough grounding in the general principles of secondary education, and each must be well at home in the whole field of education. The junior high school principal needs, moreover, a more intimate acquaintance with the field of elementary education than does the senior high school principal. Similarly, the senior high school principal requires a more detailed understanding of higher education than does the junior high school principal.

The junior high school principalship calls doubtless in certain respects also for personal qualifications somewhat different from those desirable in the senior high school principalship. We shall make no attempt to elaborate these at this point. For some time to come the prospective secondary-school principal will in many cases at least enter the services of one or the other of these schools under the influence of other factors than a clear consciousness of peculiar personal fitness for one or the other.

On the whole the junior high school principalship should

make a deep appeal to able men and women. It offers without question unusual opportunities for service, for leadership, for educational growth and professional advancement, for constructive educational engineering, and even for remuneration. Since the compulsory school age is rapidly coming to cover the whole junior high school period, junior high schools are increasing rapidly in both number and size. Under these circumstances the junior high school principalship is destined to become increasingly attractive and remunerative.

In a recent report of the Bureau of Education regarding the highest paid elementary and junior high school principals in cities having a population of ten thousand or over, Miss Bertha Hebb brings out the fact that some cities have already begun to offer fair salaries to their junior high school principals. Miss Hebb says :

The most frequent maximum salary paid junior high school principals, as may be seen from the tables, is \$3,000 per annum, six cities upon the list paying at this rate ; and the highest maximums are paid by the cities of Philadelphia and Pittsburgh, Pa., namely, \$5,000 per annum.¹

The assistant principals. The assistant principalships of a secondary school are obviously integral parts of the principalship. This being the case, we need not discuss them at length at this point. In a school which is administered on a scientific basis the functions of the assistant principals will be those which the principal delegates to them after a careful analysis of the total situation. This delegation will of necessity vary from school to school, but in a modern school it will always be effected in the interests

¹ *School Board Journal*, Vol. LXV, p. 44.

of educational economy and efficiency. The really strong principal will not hesitate to delegate some of the foremost functions of the principalship to his assistants when they are as well or better qualified to perform them, and when it appears to be to the best interests of the school. The weak principal, on the other hand, will make it one of his chief concerns to keep his assistants very obviously on the assistant level.

Since many assistant principals are principals in the making, in the sense that they will sooner or later succeed to principalships, and since their possibilities for service are limited only by their capacities, they should be, from the standpoint of natural ability and training, as far as possible the equals of the principal. To select weak individuals for the assistant principalships is a grave mistake. Only a weak principal will countenance such a policy.

Other things being equal, the assistant principals should as far as possible complement the principal. They should be strongest where he is weakest. Thus a principal who is weak in supervision should strive to secure assistants who are peculiarly qualified for that type of service. Similarly, when the principal is a man he should secure a woman as first assistant principal, and vice versa. And so we might continue indefinitely.

Heads of departments. Heads of departments have evolved rather gradually with the coming of the relatively large secondary school. The office is, nevertheless, like that of the principal, still very much in the making. In the past the functions of a head of a department have too often been purely administrative, managerial, or even clerical, and not infrequently they were so restricted that the office was a purely nominal one, implying little more than

senior rank in the department. Some school systems even went so far as to abolish it altogether.

The idea that the office should have, along with certain definite administrative functions delegated by the principal, paramount supervisory functions is a comparatively recent one. However, it is gaining increasing recognition both in theory and in practice. That there is need of extensive and thoroughgoing supervision in our junior and senior high schools has already been stressed in connection with the discussion of the office of the principal. While the principal and the assistant principals should initiate and direct such supervision, it is quite obvious that they lack in large part the specialized knowledge and skill which are indispensable for effective supervision within the many and varied departments of a modern secondary school. In the last analysis only the members of the several departments who have spent years in specializing in their respective fields possess the special knowledge and skill which are essential for adequate departmental supervision.

Other things being equal, the head of a department should of course be the most highly trained member of the department. This is true with regard to both academic (or technical) and professional training. With reasonable time-allowance such heads of departments constitute without question most effective agencies for supervision, always of course under the coördinating influence of the principal and the assistant principals. In the recent report of the Survey of the Public Schools of Philadelphia the specific duties of heads of departments are summarized in part as follows:

Specifically, the duties of the head of a department are to ascertain that each teacher in his group —

1. Is adequately equipped with knowledge of the subject assigned him.
2. Makes regular and careful preparation for the teaching of each class.
3. Consistently seeks accepted objectives.
4. Presents his subject-matter skillfully, using the appropriate assignments, questions, problems, and drill devices.
5. Secures and maintains interest and so prevents the interruptions of petty discipline.
6. Maintains the best possible physical conditions for teaching.
7. Uses the most economical elements of class management.
8. Properly coördinates his work with that of his colleagues.
9. Progresses according to schedule, at the same time maintaining good standards.
10. Distributes his attention to all pupils of the class.
11. Makes proper provisions for individual differences of ability.¹

THE JUNIOR HIGH SCHOOL PLANT

Standards in process of formulation. The standards to which the junior high school plant may ultimately be expected to conform are still, in common with many other features of the new institution, in process of formulation. At the outset junior high schools occupied in most cases remodeled elementary-school plants. Occasionally an old high-school plant was available for the same purpose. Some junior high schools were of course housed in new plants from the very beginning. But these, too, were often so inadequate from the standpoint of the real needs of the new institution that they marked but little advance upon the remodeled plants. On the whole the early housing of junior high schools was at best very unsatisfactory.

In the course of the last decade, however, marked progress

¹ *Report of the Survey of the Public Schools of Philadelphia*, Book II, pp. 107-108.

has been made in the formulation of standards in keeping with the needs of the new institution. Today most communities are giving the problem of securing suitable junior high school plants the most serious and thoughtful consideration. Everywhere one reads and hears that the standards for these plants must be determined by the character of the activities which are demanded by the major purposes of the new institution. Increasingly, too, one encounters junior high school plants which are strikingly complete from the standpoint of present needs.

Actual status of existing junior high school plants. Recent investigations throw considerable light upon the actual status of existing junior high school plants throughout the country. In general the results indicate that a large proportion of our junior high schools are still housed in remodeled buildings and that many of the buildings which were built specifically for junior high schools do not meet the needs of the new institution to the extent that they should. They also bring out the fact, however, that some schools are occupying plants which are remarkably complete and that plants everywhere are being planned with increasing care.

Terry's findings. Terry recently secured data from 149 junior high schools located in various parts of the country. The enrollment in these schools ranged all the way from 200 to 1,750. In tabulating the results, Terry arranged the schools in two groups on the basis of size — schools with an enrollment of over 500 being designated as large schools, and schools with an enrollment of less than 500 as small schools. There were 94 of the former and 55 of the latter.

Fifty-two of the 94 large schools were housed in buildings which had been designed especially for junior high schools ;

the remaining 42 were housed in remodeled buildings. Of the 55 small schools, 24 were housed in buildings especially designed for them; the remaining 31 were housed in buildings which had been remodeled.¹

The most significant findings relate, however, to the provisions for various kinds of floor space in these two types of buildings. Terry summarizes these in the following table:

PERCENTAGE OF JUNIOR HIGH SCHOOL BUILDINGS PROVIDING VARIOUS KINDS OF FLOOR SPACE ²

KINDS OF FLOOR SPACE	SCHOOLS ENROLLING MORE THAN 500 PUPILS		SCHOOLS ENROLLING LESS THAN 500 PUPILS
	Designed	Remodeled	
General:			
1. Class or recitation room	100	100	100
2. Principal's office	100	95	90
3. Auditorium	96	83	73
4. Stage in auditorium	92	74	63
5. Rest room for women teachers	92	83	63
6. Library	79	69	44
7. Textbook stack room	65	55	45
8. Reception room	63	33	27
9. Rest room for men teachers	42	19	5
10. Study hall	33	29	17
11. Stack room for library	27	21	17
12. Assembly hall	20	19	28
Industrial arts:			
13. Manual-training shop	79	83	82
14. Mechanical-drawing room	69	81	51
15. Separate woodworking shop	65	69	38
16. Separate sheet-metal shop	46	40	15
17. Printing shop	46	40	23
18. Tool room for manual training	46	50	42
19. Separate finishing room	27	20	15
20. Separate wood-turning room	15	19	16
21. Metal-lathe shop	12	14	7
22. Separate bench shop	10	21	20

¹ *School Review*, Vol. XXXI, pp. 14-15.

² *Op. cit.*, pp. 16-17.

PERCENTAGE OF JUNIOR HIGH SCHOOL BUILDINGS PROVIDING VARIOUS
KINDS OF FLOOR SPACE — *Continued*

KINDS OF FLOOR SPACE	SCHOOLS ENROLLING MORE THAN 500 PUPILS		SCHOOLS ENROLLING LESS THAN 500 PUPILS
	Designed	Remodeled	
Industrial arts (<i>continued</i>)			
23. Electrical shop.....	10	5	0
24. Separate carpentry shop.....	8	10	5
25. Auto shop.....	8	0	0
26. Separate joinery shop.....	4	10	0
27. Separate plumbing shop.....	2	10	5
Physical education:			
28. Showers for boys.....	90	62	46
29. Showers for girls.....	87	50	32
30. Physical director's room.....	71	50	38
31. Gymnasium lockers for boys.....	67	42	32
32. Gymnasium lockers for girls.....	62	38	35
33. Gymnasium for both boys and girls	60	36	48
34. General lockers for boys.....	40	24	22
35. General lockers for girls.....	40	24	22
36. Rest room for girls.....	38	26	8
37. Separate gymnasium for girls.....	29	31	6
38. Separate gymnasium for boys.....	27	26	6
39. Swimming pool.....	8	7	2
Domestic science:			
40. Cooking room for home economics.	98	95	85
41. Sewing room for home economics.	98	88	67
42. Dining room for home economics..	87	52	44
43. Supply room for home economics..	63	52	31
44. Separate fitting room.....	44	26	20
45. Bedroom for home economics..	40	10	11
46. Laundry for home economics.....	33	17	8
47. Dressmaking room.....	15	21	11
48. Millinery room.....	12	21	11
49. Separate designing room.....	0	7	2
Science:			
50. Separate general science laboratory.	77	60	13
51. Apparatus storage room.....	37	33	12
52. Separate geography laboratory....	23	31	20
53. Separate agriculture laboratory....	15	10	9

PERCENTAGE OF JUNIOR HIGH SCHOOL BUILDINGS PROVIDING VARIOUS
KINDS OF FLOOR SPACE — *Continued*

KINDS OF FLOOR SPACE	SCHOOLS ENROLLING MORE THAN 500 PUPILS		SCHOOLS ENROLLING LESS THAN 500 PUPILS
	Designed	Remodeled	
Science (<i>continued</i>)			
54. Separate botany laboratory	10	7	11
55. Greenhouse	10	10	0
56. Separate physiology laboratory	8	5	9
Fine arts:			
57. Freehand-drawing room	71	76	31
58. Music room	67	57	38
59. Separate art-exhibit room	15	3	2
60. Separate art-metal room	4	12	3
61. Separate clay-modeling room	2	5	3
Commercial:			
62. Separate typewriting room	48	52	16
63. Separate bookkeeping room	44	40	26
64. Stenography and typewriting room	33	24	26
65. Separate banking room	10	7	8
Lunch room:			
66. Cafeteria	65	50	25
67. Separate teachers' lunch room	29	5	5
68. Separate girls' lunch room	19	14	7
69. Separate boys' lunch room	19	17	7

In comparing the floor-space provisions of remodeled and specially designed junior high school buildings on the strength of the data shown in the above table, Terry says:

The data . . . prove conclusively that junior high schools housed in buildings originally designed for that purpose have at their disposal a far more adequate range of specialized space provisions than schools housed in remodeled structures. The facts which are here discussed suggest that a city tends to curtail the educational program of the junior high school to a marked extent when it decides to house the new institution in a remodeled building. Limited educational advantages and remodeled buildings seem to go together. . . .

As a class, the remodeled buildings appear to represent less advanced stages of the reorganization movement than the specially designed buildings. Considerations of cost seem to have dominated the situation. The liberal educational program of the modern junior high school cannot but be seriously handicapped by the limited and conservative building provisions of many of the remodeled structures. One cannot escape the conclusion that boards of education should make every possible effort to erect new buildings for junior high schools rather than house them in remodeled structures.¹

In conclusion, Terry points out that the minimum floor-space provisions of a modern junior high school building should include at the very least all the features which are found in 50 per cent of the larger specially designed junior high school buildings.

Superintendent Bentley's findings. Superintendent Bentley of Duluth, Minnesota, also reports certain findings brought to light through an investigation undertaken preparatory to the planning of several new junior high school buildings. He found among other things that the buildings which are gaining favor are not as elaborate as the senior high school buildings; that science laboratories are large rooms with relatively simple equipment; that there is, in some buildings at least, a tendency "to turn from the multiplicity of special shops to the large general shop"; that there is a decided tendency to replace "the familiar horse-shoe type of domestic science laboratory" with "the unit kitchen equipment," and "to install the lunch room in connection with the household arts" department; that "nearly all the new buildings include a swimming pool and at least two gymnasiums"; that "all the schools studied" look upon "an auditorium as a necessary part of

¹ *Op. cit.*, pp. 18-21.

their plan"; that corridors are being carefully planned; that ample provisions are being made for the housing of the library; that "all of the buildings" contain carefully planned suites for administrative purposes, as well as rest rooms and clinics. In general it was found, further, that from 50 to 65 per cent of the capacity of the buildings was given over to special rooms. Finally, most buildings were planned in such a way that many of the special features could be made accessible to the public without interfering with other parts of the plant.¹

Planning junior high school buildings. It is not our purpose at this point to enter into a discussion of the more technical aspects of the planning of junior high school buildings. This is increasingly becoming a matter of special concern to the specialist. Up to a certain point, however, the plans for a modern junior high school plant must be drawn up on a coöperative basis. The community must decide upon the amount of money which is to be invested in the project; the board of education must select the specialist who is to design the plant in the technical sense; the superintendent of schools, together with the principals, supervisors, and teachers, must decide upon the activities which the major purposes of the new institution demand and the conditions under which these may be carried on most advantageously, and must communicate them to the specialist in order that he may shape his plans accordingly. There is ample evidence that communities are increasingly planning their junior high school buildings on this broad coöperative basis.

Detroit as an example. Along with other leading cities, Detroit recently adopted a comprehensive school-building

¹ N. E. A. *Addresses and Proceedings*, 1922, pp. 400-404.

program. This includes among other things definite provision for twenty-two new junior high school buildings with capacities varying from twelve hundred to eighteen hundred pupils. In discussing the method of procedure which the authorities followed in arriving at definite standards for these plants, Harrington says :

The first step in planning the standard intermediate-school building was to decide upon the program of studies that would be put into operation in it. Study was then made of a large number of individual programs in Detroit and other cities to determine what proportion of the enrollment of the school might reasonably be expected to be found in any given activity. Upon this basis the various space provisions of the building were worked out, and in addition it was planned to make the building an attractive and commodious community center. Upon this basis the preliminary sketches for the buildings, showing space requirements and the interrelation of the various rooms, were made.

The various departments of instruction in the city were then asked to work out the educational specifications of the various instructional and non-instructional rooms of the building. For instance, the details of the layout of the gymnasium, locker rooms, showers, and swimming pools were formulated by the health department. These details were incorporated into the plans by the architects and engineers, and checked and rechecked therein by the various departments of instruction so that the plans as completed represent the collective best ideas of all the departments of instruction in the city. This standard building is thus definitely planned to accommodate a specific number of pupils working in accordance with a predetermined program of studies.¹

Examples of modern junior high school plants. As indicated earlier, the standards to which the junior high school plant may ultimately be expected to conform are still so much in process of formulation that it would be rather hazardous at this time to attempt to characterize

¹ *American School Board Journal*, Vol. LXV, July, 1922, p. 56.

the standard junior high school plant. Nor would it be much safer, in the face of the striking variation in practice from state to state and from community to community, to characterize the typical plant. And yet, many of the more recent plants represent so much excellence from the standpoint of the needs of the new institution that one may well look upon them as very close approximations to desirable standards of practice. We shall by way of illustration cite brief descriptions of two of these.

The Barbour Intermediate-School plant of Detroit. This plant accommodates eighteen hundred pupils. It corresponds exactly to the standard plan for intermediate-school plants recently worked out by the authorities of the city. Harrington tabulates details concerning the various rooms, instructional and non-instructional, as on the following page.

In characterizing some of the special features of the plant, he says :

Two gymnasiums are provided, each 50' \times 80'. Each has a spectators' balcony, physical examination rooms, and teachers' offices in connection with it. There are two smaller gymnasiums 16' \times 45' for individual corrective work. The gymnasiums are on the second floor, and directly below them are the locker and shower rooms.

There are two swimming pools, each 25' \times 45', one for boys and one for girls. Two covered play courts are provided outside the building, with capacity of about seventy each. Besides these, the building has a large playground surfaced with cinders and limestone screenings.

The auditorium is situated on the first floor directly between the main entrances. It has a seating capacity of 750 and is fully equipped with motion-picture and stage facilities. It will be in constant use as an instructional room.

The library is on the third floor directly over the auditorium. Its shelves have a capacity for ten thousand volumes. The main

INSTRUCTIONAL	No.	SIZE	CAPACITY
Non-specialized classrooms....	26	22' × 26'	35
General science laboratories . .	3	22' × 35'	35
Music rooms.....	2	22' × 26'	35
Bookkeeping.....	2	22' × 35'	35
Typewriting.....	1	22' × 26'	35
Art.....	2	22' × 40'	35
Sewing.....	3	22' × 48'	35
Model flat	1		
Cooking.....	3	22' × 35'	24
Mechanical drawing	2	22' × 35'	35
Wood shop.....	1	22' × 52'	24
Print shop.....	1	22' × 24'	20
Advanced machine shop	1	22' × 52'	24
Elementary machine shop .	1	22' × 35'	24
Electric shop.....	1	22' × 43'	
General shop.. ..	1	22' × 46'	
Auto shop....	1	26' × 52'	
Gymnasiums.....	2	50' × 80'	
Corrective gymnasiums	2	16' × 45'	
Swimming pools.....	2	25' × 40'	
Play courts.....	2	44' × 50'	
Tutoring rooms.....	4	17' × 22'	
Home science.....	1	22' × 26'	
NON-INSTRUCTIONAL	No.		
Toilets.....	18		
Offices (administration, etc.)...	15		
Janitors' rooms.....	5		
Cafeteria.....	1		
Boy Scouts.....	1		
Community	2		
Locker rooms (gymnasium)....	6		
Shower-bath rooms.....	2		
Medical clinic.....	1		
Conference and consultation	4		
Auditorium.....	1		
Library.....	1		
Heating and power unit.....	1		

reading room seats about 250. Besides this, in connection with the library, there is a library classroom seating 40, equipped with stereopticon facilities, a librarian's workroom, and seven small conference and study rooms.

The administrative suite is situated on the second floor and contains a large waiting room and office for clerks, private offices for the principal, the assistant principal, the six heads of the departments of instruction, the two vocational counsellors, and the attendance officer.

No effort has been spared to make the building an attractive community center. Two large clubrooms, one for men and one for women, are provided just off the main entrances on the first floor. The auditorium and library are conveniently located for community use. Locker rooms for community men and women are included in the physical training plant. Arrangements are made so that it is possible to shut off this part of the building from the purely instructional part, and it may also be heated separately.

The main corridors are 14' wide; those in the wings are 12'. Corridors are floored with battleship linoleum with terrazzo cove and base.¹

The Garfield Junior High School plant of Berkeley. The Garfield Junior High School plant was opened in 1921. It is characterized as follows in a recent bulletin² of the Bureau of Education :

Upon an ideal site of nineteen acres a two-story building with forty regular and special classrooms now houses the 825 students. The plans call for a spacious auditorium, a gymnasium, a detached manual arts department, and other special features that will be erected as finances permit. When these are added, Garfield will have a school plant admirably suited for developing the best type of junior high school. Through the praiseworthy coöperation of the community with the board of education a frame gymnasium, 100 by 54 feet, with an annex 100 by 20 feet, was built and equipped during the summer of 1922.

Some of the special features in the new main building are deserving of mention. On each floor is a double classroom, with a stage room

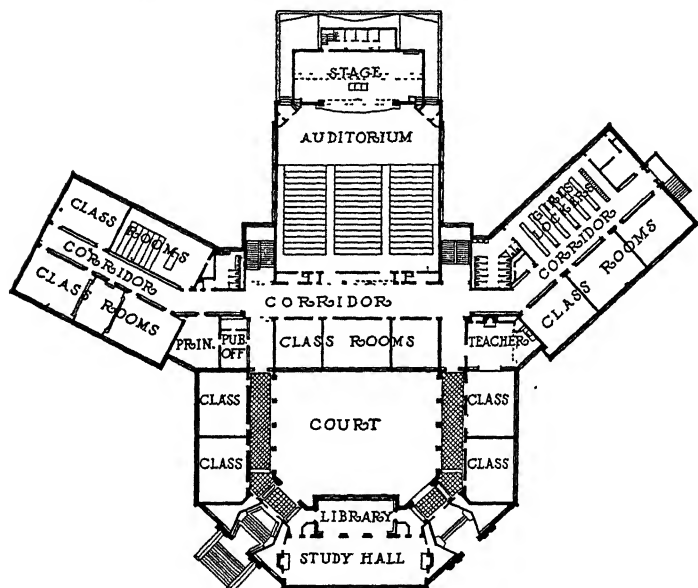
¹ *American School Board Journal*, Vol. LXV, July, 1922, pp. 58-59.

² U. S. Bureau of Education, *Bulletin No. 4*, 1924, pp. 39-40.

between. The sliding walls of the latter permit it to be thrown with either or both of the classrooms. The stage is raised 18 inches. This arrangement for dramatization, small assemblies, clubs, and choruses is proving of great value.

The art department includes two well-arranged drawing rooms, with a specially equipped crafts room between.

The commodious library opens into a large artistic reading room,



GARFIELD JUNIOR HIGH SCHOOL—FIRST FLOOR PLAN

with an open fireplace at each end. The library has grown from fifty volumes to fifteen hundred volumes in one year.

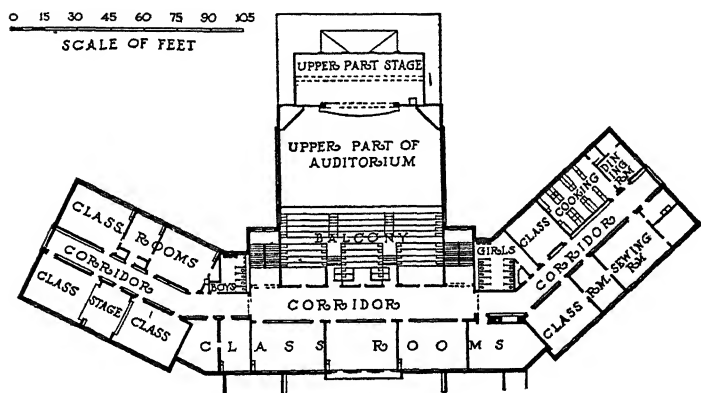
The household arts room is exceptionally lighted and, beyond all, convenient. The household science room is equipped with six attractive kitchenettes, each accommodating four girls.

The entire third floor is given over to a cafeteria and lunch room, where more than five hundred children take their lunches daily. The location of this feature of the school is very satisfactory, as no odor from cooking reaches the classrooms.

Other special rooms are the science room (with raised seats and a convenient laboratory), club room, teachers' room, laundry, matron's room, first-aid room, girls' advisory room, and demonstration bedroom.

THE STANDARDIZATION OF THE JUNIOR HIGH SCHOOL AND ITS ARTICULATION WITH THE SENIOR HIGH SCHOOL

Basic considerations. We have assumed all along that the junior high school is intrinsically an integral part of the secondary division of our school system. That this point



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of view is in accord with the best judgment of representative school men throughout the country is clearly attested by the results of an investigation recently completed by a committee of the North Central Association of Colleges and Secondary Schools. Ninety-three per cent of the school men replying to the question: "Should the secondary-school system include grades seven to twelve?" replied affirmatively.¹

¹ *Proceedings of the Twenty-eighth Annual Meeting of the North Central Association of Colleges and Secondary Schools*, p. 57.

We have maintained, further, that the junior high school should be organized and administered as a separate unit of the secondary division of our school system. That this point of view is also in keeping with the best educational thought throughout the country is shown by the findings of the committee referred to above. In response to the question: "How do you prefer to see the six years of secondary education organized — (a) On the six-year plan? (b) On the two-four plan? (c) On the three-three plan?" 93 per cent expressed themselves in favor of the three-three plan.¹

Finally, we have maintained throughout our discussion that the several subdivisions of our school system must be carefully articulated in order that they may constitute an organic whole functioning in the interests of democracy and efficiency. There is ample indirect evidence that this point of view, too, is in keeping with the best educational thought of the country. In actual practice our school system is as yet very far from being a thoroughly functional unit.

The problem of standardization. If our educational system is to become a unit in the truest sense of the word, each of the several divisions must obviously be standardized and brought into functional relationship with the rest. Not only must each division be made to conform to certain basic standards of its own, but the standards of each must be brought into sequential relationship with the standards of the divisions above and below. Theoretically such standardization is a relatively simple matter. In actual practice many difficulties are encountered. One of the most difficult problems is to center the responsibility for the standardization and articulation of each of the several divisions.

¹ *Op. cit.*, p. 57.

The standards in question might obviously be determined by the division itself, by the division immediately above, by the two divisions jointly, or by a comprehensive body representing the entire educational system.

In the past the standards of a given division have usually been determined either by the division itself or by the division immediately above. Neither of these practices has proven satisfactory. The eight-year elementary school is a good example of a division which has in the main set its own standards, on the whole with little regard for antecedent or subsequent education. The four-year high school is illustrative of a division which has been standardized largely from above, on the whole with slight regard for functions other than articulation with the standardizing division. As a matter of fact neither of these agencies has been particularly successful in achieving even those ends which it stressed to the exclusion of everything else. The elementary-school authorities failed to develop a truly functional scheme of common elementary education, nor have the college authorities succeeded in developing a particularly effective scheme of college-preparatory education. In large part the failure has in each case been due to the fact that the standardizing agency did not have a sufficiently comprehensive outlook.

The educational leaders who have championed and directed the movement for a functional reorganization of our school system stand in marked contrast to the two standardizing agencies referred to above. While these educators represented various divisions of the school system and each had in the very nature of the case the interests of his own division at heart, they nevertheless saw the problem before them constantly as a whole. They were keenly aware of

the fact that each division must serve certain definite purposes of its own, but they also realized quite as fully the necessity of bringing the division into functional relationship with the divisions above and below. In consequence they championed and wrought out the beginning of a truly functional scheme of education.

Need of coöperation. In the light of these facts we feel justified in contending that the standardization of the junior high school and its articulation with the elementary school on the one hand and with the senior high school on the other is a task which calls for the coöperative endeavor of the best educational leadership of the entire school system. The junior high school authorities alone would not give sufficient attention to the problem of articulating the new division with the divisions above and below. In consequence there would be in due time two gaps in our school system in place of the one which we are now endeavoring to bridge. The senior high school authorities left to themselves would almost certainly overstress the problem of articulation. Under these circumstances the junior high school would become to too great an extent tributary to the senior high school, with the inevitable consequence that it would soon cease to function effectively with reference to the major purposes for which it was called into being. The junior and senior high school authorities together would doubtless go much farther toward bringing about an effective solution of the problem, but it is very doubtful whether they would succeed in bringing about a thoroughly functional articulation between the secondary division as such and the divisions immediately above and below. The situation calls, therefore, very obviously for coöperative endeavor on the part of the whole school system.

Steps taken by the North Central Association of Colleges and Secondary Schools. Thus far the North Central Association of Colleges and Secondary Schools has taken the most aggressive steps toward the standardization of the junior high school and its articulation with the senior high school. At the twenty-seventh annual meeting of the association a conference was called to discuss the standardization of the junior high school. Director Charles H. Judd of the School of Education of the University of Chicago proposed the following resolution for consideration :

Resolved, That this conference recommend to the North Central Association that the colleges of the Association be urged to develop as soon as possible a plan of admission that will give official recognition of the work done in the seventh and eighth grades.

In the discussion which followed, it was pointed out that such a plan would tend to interfere with the real functions of the junior high school, since it would direct its energies too largely toward meeting college entrance requirements. The resolution was accordingly voted down. Director Judd then proposed the following resolution, stating that this would leave the junior high school free to carry out its purposes :

Resolved, That the conference recommend to the North Central Association that the colleges be requested to re-write their entrance requirements so as to require not more than twelve units to be completed in grades 10, 11, and 12.

In the discussion which followed, it was pointed out that the adoption of this policy " might result in the division of the public school system in such a way as to leave the junior high school unit as an independent unit separated from the grades below and not made an integral part of the secondary period of six years."

Superintendent Gosling of Madison, Wisconsin, thereupon offered the following resolution as a substitute :

Resolved, That the conference request the three commissions of the North Central Association to appoint a joint committee to study the question of defining entrance requirements in such a way as to provide for proper recognition of work done in the junior high school, with the request that the report of the joint committee be submitted to a conference held in connection with the 1923 meeting of the association.¹

The resolution was unanimously adopted.

Report of the joint committee of the North Central Association. The joint committee made several investigations in the course of the following year and submitted a report at the twenty-eighth annual meeting of the association. Among other things, the results of these investigations showed that 93 per cent of the educators replying favored "organizing grades seven to twelve upon a secondary basis"; that 96 per cent favored the "three-three plan of organization"; that 83 per cent favored excluding ninth-grade work in certifying high-school pupils to college; that 72 per cent favored "reducing college entrance requirements to not more than twelve units, each unit to be completed in the tenth, eleventh, and twelfth grades"; that 70 per cent considered it "fundamental that junior high school standards be established by some such agency as the North Central Association"; and that 74 per cent favored the establishment of an accredited list of junior high schools by the North Central Association.

The reactions to a list of tentative junior high school standards drawn up and submitted by the committee

¹Edmondson, J. B., "The Standardization of Junior High Schools." *School and Society*, Vol. XVI, pp. 271-273.

showed that junior high school standards were gradually taking form throughout the country, although there was evidence of significant differences in point of view.

Among the final recommendations of the committee were the following :

1. That the colleges, in order to encourage the reorganization of the seventh, eighth, and ninth grades upon a junior high school basis, be requested to provide an alternative system of entrance requirements to include not more than twelve units to be completed in the tenth, eleventh, and twelfth grades.

2. That a committee be appointed by the Executive Committee of the North Central Association to prepare in keeping with the preceding recommendation the requirements for a list of recognized junior high schools and to formulate a plan for the inspection of such schools with the view of establishing a recognized list ; said committee to consist of two members of the Commission on Unit Courses and Curricula, two members of the Commission on Secondary Schools, two members of the Commission on Higher Institutions, and six public school officials ; said committee to report at the North Central Meeting in March, 1924. It is further recommended that the said committee report on the number of schools in the North Central territory which meet the requirements proposed and that the work be carried to the point where a list of such schools can be submitted for approval in 1925.¹

At the twenty-ninth annual meeting of the association, in 1924, the Committee on Junior High Schools submitted a set of tentative standards. These were adopted as a basis for the recognition of junior high schools during the following year. They are to be modified from time to time as the scope and functions of the new institution become more clearly defined.

The committee also reported that the University of Ne-

¹ *Proceedings of the Twenty-eighth Annual Meeting of the North Central Association of Colleges and Secondary Schools, Part I, pp. 55-56.*

braska had followed the example of the University of Michigan in basing college entrance on twelve units of work completed in the tenth, eleventh, and twelfth grades of the high school.¹

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